Dec. 22, 1986

Chemical Marketing Reporter

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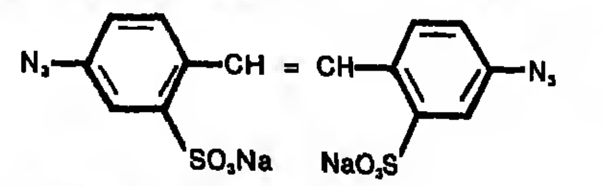
NEWS ABROAD

THE MARKETS



CMR MARKET INDEX

CHEMICAL MARKETING REPORTER's market index of chemicals and related materials (100=1974 average), based on 97 key commercial chemicals, appears alongside with data for two weeks ago, last month and last year.

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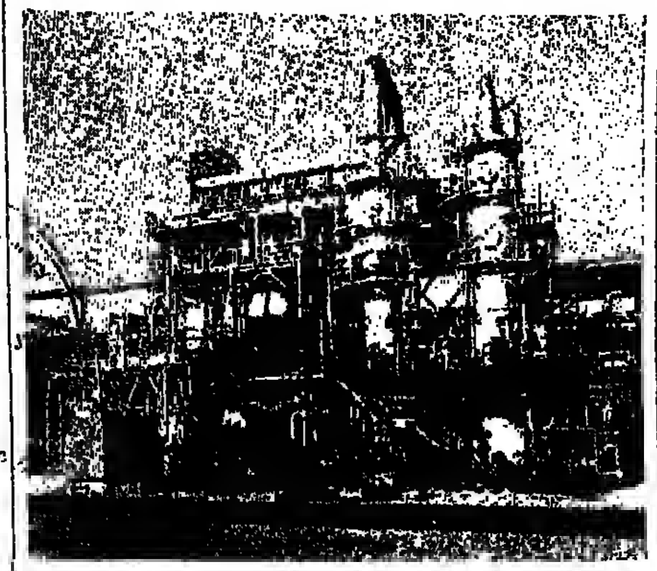
CARBON BLACK: Producers seeking higher prices.

VINYL CHLORIDE: Prices seem poised to follow... rise.

Chemical Marketing Reporter
NEWSPAPER



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Du Pont Scores Victory in Aramid Battle

E.I. du Pont de Nemours Inc. scored another victory in its ongoing battle with Akzo NV's Enka subsidiary over "Kevlar" para-aramid fiber patents and selling rights last week, when the US Court of Appeals upheld the ITC's 1985 ruling barring imports of Akzo's "Twaron" fiber into the US for the next five years.

The ruling ssys that Akzo's imports of "Twaron" para-aramid violated Du Pont's patent and damaged the US company's domestic market.

Akzo's Enks subsidiary moved to appeal the ITC ruling, which covers yarn, pulp, paper and related forms of the fiber, in January after President Reagan upheld the ITC ruling. The Dutch government claimed the ruling was unfsir and ignored Akzo's previous counterclaims of Du Pont pstent Infringement.

Akzo still has the option of appealing the court decision, but spokesmen for Enka say the company has not yet decided on a course of action. The market for the material worldwide is said to be growing 30 percent annually. The recent court decision, it is estimated, will free between 5 percent and 10 percent of US market share for Du Pont's product.

Du Pont introduced its "Kevlar" para-aramid fiber commercially in 1971. Its "Nomex" solvent-spun aramid fiber has been on the market since 1981.

Currently, Du Pont's "Kevlar" is patented in 32 countries. Reacting to the court ruling, Richard Reese Jr., director of Du Pont's Industrial Products Division said, "We are gratified that the court supports the ITC on this issue of inventors' rights; the ITC investigation wss one of the most extensive ever conducted, and it is significant in preserving Du Pont's rights under the US patent system." The two companies have been involved in a series of dispute over aramid fiber patents and aelling rights in the US and Europe since 1980. Recent developments in a growing Japanese market may add yet another stage to the conflict.

In 1983, Du Pont gained "Kevlar" patent protection in West Germany, despite opposition from Akzo's German subsidiary. That same year, Enka filed suit in the US, claiming that Du Pont'a "Kevlar" patents were invalid, and that its "Arenka" fiber, made by a different polymerization process, did not infringe on Du Pont pateots.

The following year, Akzo was issued patents for its product in the Netherlands, despite Du Pont's opposition. The company brought an 11-million-pound-per-year plant on line in the Netherlands in 1985.

Du Pont has called "Kevlar" the "most important

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Carbide Sells Ag Unit, Canadian PE, Buys UK Unit

Union Carbide took a number of steps towards restructuring recently, including the completion of the sale of its agricultural business, the sale of some of its Canadian petrochemical business, and the acquisition of some specialty gas assets in the UK.

In the largest of these transactions, Carbide sold substantially all of its worldwide agricultural products business to Rhone-Poulenc Inc. for $575 million in cash. On July 2, 1986, Union Carbide announced plans to sell its agricultural products business. A definitive agreement for the sale was signed with Rhone-Poulenc Inc. on Nov. 13. The closing of the sale of certain international portions of the business is subject to local governmental and other approvals.

Union Carbide Corporation said that no material gain or loss is expected on the transaction.

Principal facilities of Union Carbide Agricultural Products Company Inc., a wholly-owned subsidiary of Union Carbide Corporation are located in Institute, W. Va.; Research Triangle Park, N.C.; Woodbine, Ga.; Clinton, Iowa; St. Joseph and St. Louis, Mo.; and Ambler, Pa., with affiliate facilities in Calgary, Alberta, Canada; Bezier, France; and Cubatao, Brazil.

The agricultural products facilities of Union Carbide India Limited are not included in the sale.

The sale has been structured to assure Union Carbide's continued ability to supply agricultural chemicals currently produced at Institute, W. Va., where agricultural chemicals also are manufactured.

Worldwide, there are approximately 3,600 employees in Union Carbide's agricultural products business.

Rhone-Poulenc says the combination of its business with Carbide's will make it the third biggest crop protection business in the world and will enhance its position in the US as well as abroad.

In the second transaction Union Carbide Canada Limited agreed to sell its Moore Township, Ontario polyethylene plant snd associated pulyethylene business to Novo, An Alberta Corporation. The sale does not include the part of Carbide's business that supplies wire and cable markets, or the polyethylene operation Carbide conducts for Petromont Inc. at Carbide's Montreal East petrochemical complex.

Closing of the sale is expected in February. Carbide Canada, which is a majority-owned affiliate of Union Carbide Corporation in Danbury, Conn., says the sale is not expected to have a material impact on its financial position.

In the third move, Union Carbide Corporation announced that Union Carbide United Kingdom Limited, a wholly-owned subsidiary, has acquired 50 percent of Gas & Equipment, Ltd., a UK-based marketer of industrial and specialty gases.

Gas & Equipment, Ltd., is a supplier of diving gases to the offshore oil industry. It has subsidiaries in Norway, Singapore, snd the US.

Additionally, under the name of Gas & Equipment, Ltd., the mainly helium-based activities of Gas & Equipment will be combined with the existing United Kingdom Specialty Gases business of Union Carbide. Gas & Equipment will concentrate on expanding its presence in the high-growth markets requiring specialty gases, such as the fast-growing electronics industry.

"This venture represents yet another step in our effort to pursue high-growth markets where we can take a leading position," says John H. MacLean, president of Union Carbide's Industrial Gases Business Group.

FMC Sells Chloralkali Plant To CanadianOxy for $25 MM

FMC Corporation has completed its withdrawal from the chiorsikail business with the sale of its chlorine/caustic soda operation at Squamish, British Columbia, to Canadian Occidental Petroleum Ltd. for $25 million.

The operation employs 75 people and produces 60,000 tons a year of chlorine, 66,000 tons of caustic soda and 3,000 tons of muriatic acid. The products are used as bleaching agents by the local pulp industry.

The Squamish facility will be managed and operated by CanadianOxy's Industrial chemicals Division, which runs similar plants in Nanaimo, British Columbia, and Brandon, Manitoba, as well as a sodium chlorate plant adjacent to the Squamish plant.

CanadianOxy says the purchase of the FMC facility will improve CanadianOxy's competitiveness, cost-effectiveness and ability to better service the demand for choloralkali products.

Under the purchase agreement, CanadianOxy will supply hydrogen, steam and other utilitiea and services to a hydrogen peroxids plant that FMC still plans to build at Squamish "whsn market conditions permit."

FMC will also retain its existing hydrogen peroxide distribution facility at Squamiah, which was built in anticipation of the hydrogen peroxide plant.

FMC broke ground for the hydrogsn peroxide plant in the Summer of 1985, but by Fall of last year, FMC had begun to re-evaluate the size of the facility because of predictions of industry overcapacity by 1990.

The company than announced in February that it was postponing construction because of otbsr projects scheduled to come on line. Degussa Corporation, for example, is bringing an 80-million-pound plant on stream next year in Mobile, Ala.

In addition to its hydrogen peroxide activities, FMC says it also remains committed to serving the Western Canadian markat with other industrial chemicals, including soda ash and phosphates.

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DECEMBER 29, 1986

MDI Producers Say Demand Rise Will Slow

Producers of diphenylmethane di-isocyanate (MDI) say that demand for their product has grown from 6 to 8 percent this year. Yet, even as one producer prepares to debottleneck in the second quarter of 1987, producers say they expect little demand growth in the coming year.

Producers ssy that relatively snug market conditions, reflecting the strong growth rate, have held pricing firm this quarter. Prices were increased by 4 cents per pound industry-wide late in the third quarter, and producers do not point to any attrition from that level.

Two producers say the industry has been running "flat out" for the past aeveral months. Another saya that this is much the case for three of the four producers, slthough the fourth "seems to have some (excess) material." That producer estimatea an industry operating rate of 90 percent.

BASF Wyandotte Corporatton says it will debottleneck its Geismar, La., plant by April from 100 million to 155 million pounds per year.

The company says it made the necessary arrangements for the tie-in during an October turnaround, so that only a couple daya' downtime will be required in the Spring. Other producers say they balieve a fair amount of the new production will service BASF'a parent company in Germany.

BASF's turnaround and a production problem experienced by Rubicon Chemicsls, Inc., are said to bave contributed to the snug market picture.

"Inventories bave been depleted trying to keep up with demand," says one producer, and another comments that "the markst is going to be tight for another six to eight months" until a greater abundance of material is available.

Another producer, howevsr, downplaya talk of tightness in the industry: "The two (outages) caused a flurry of stories that supply waa short; when everybody'a running, things are evsn."

A healthy year for the construction industry has been a prims ingredient in MDI's growth this year, in soch applications as laminate board, foam and panelling.

Howaver, there is widespread belief that the enactment of the new tax structure will curtail construction. It is also believed that automotive demand will also drop as a result of the tax law and the unlikelihood that sales will be pushed as heavily as this year.

An aniline supplier to the MDI industry comments that "construction has been strong for the last two to three years, so demand has been exhausted to some extent; I guess it will be down a little bit next year, but we thought that it would tall off mid-year" and it has not yet done so.

Seasonally, aniline demand for MDI usually slows during the fourth quarter since construction generally declines during the first quarter, "but this year, things haven't slowed up," he says.

It ia noted thot aniline pricing tends to

Continued on Page 11

BASF AT GEISMAR: The company is planning a debottlenecking project here that will take capacity from 100 million pounds now to 155 million by April.

Pesticide Restrictions Extended For Food & Feed Products by FDA

Environmental Protection Agency has revoked the tolerances for aldrin, dieldrin, chlordane and DDT, four pesticide products previously cancelled. Also affected are the tolerances for TDE, a degradation product of DDT. The agency has also revoked the food and feed additive regulations for DDT and its degradant TDE and DDE. The tolerances, which are the maximum residue levels allowable in food or feed, were not revoked at the time of the cancellations because of the persistence of these pesticides in the environment and the resultant expectation that residues would be present in raw agricultural commodities and related processed commodities for a significant period of time, according to EPA.

The revoked tolerances will be replaced with action levels which Food & Drug Administration will set and which are generally lower than the tolerance levels.

An action level is a temporary safety level for an unexpected pesticide residue in a food not targeted for treatment. They are reviewed regularly to determine if they should be further lowered based on best current data on residues and exposure.

EPA says the lower action levels should deter illegal use of these cancelled pesticides in the US and should reduce or halt the importation of foreign commodities which have been treated with banned pesticides.

The agency says the revocation rules also remove any advantage that foreign growers may have gained over US growers through their continued use of pesticides that can no longer be legally used here.

Chlordane is a pesticide once widely used to control insects in many agricultural crops as well as on lawns, gardens and around the

Continued on Page 17

Adhesives Plant Slated In California by Fuller

H.B. Fuller Company, the St. Paul, Minn.-based manufacturer of specialty chemicals, plans to build an adhesive production facility in Roseville, Calif.

The new $10 million plant, planned to open in September, 1988, will be part of H.B. Fuller Company's Adhesives, Sealants & Coatings Division.

The new 80,000 square foot adhesive plant will occupy nine acres of H.B. Fuller Company's 40-acre site in Foothills Industrial Park. Additional development of the site is possible in the future, but as yet is unscheduled.

The Roseville facility is designed to replace a smaller, outdated plant in Newark, Calif., which will gradually be phased out.

Asahi Adds to Count Of Membrane Units

Caustic soda capacity based on Asahi Chemical Industry Company's membrane chloralkali technology will reach 1.3 million tons in 1987, including five new plants scheduled to come on line around the world in the new year.

A pair of new 20,000-ton units are expected to start up in China next year and an additional 10,000-ton plant in 1988. Sumitomo Chemical will bring on an 84,000-ton facility in Japan in '87 and Brunswick Chemical Company will add a 52,000-ton plant in the US.

Largest plant in the offing, however, is the joint E.I. du Pont de Nemours & Co. and Olin Corporation chloralkali facility underway at Niagara Falls, N.Y. and scheduled for late 1987. The $100 million unit is the largest to use the Asahi technology after the 30,000-ton plant of Akzo Zout Chemie in the Netherlands which was started up in 1983 and expanded in 1985.

Columbian Sold To Phelps Dodge

Columbian Chemicals, the second largest producer of carbon black in the US, has been purchased for $250 million by Phelps Dodge Corporation, Phelps Dodge announced. Phelps says the purchase is part of a larger effort to diversify and expand into new businesses.

Headquartered in Atlanta, Columbian Chemicals produces specialty blacks and synthetic oxide in addition to its carbon blacks for the rubber industry. Columbian has plants in Great Britain, West Germany, Italy, the Phillipines and Canada, as well as five carbon black plants and two synthetic oxide plants in the US.

Columbian will retain its present management.

R&D Spending Set to Rise

The chemical industry will spend some $10.8 billion on research and development in 1987, with 97.1 percent to be industrially funded, according to an annual survey by the Columbus Division of Battelle, Inc.

The research group forecasts total R&D expenditures in the US in calendar year 1987 of $127.4 billion, a $8.8 billion increase over the $118.6 billion the National Science Foundation estimates will actually be spent in 1986.

While part of the increase will be absorbed by continued inflation, Battelle forecasts a real increase in R&D expenditures of 4.33 percent, slightly higher than the ten-year average rate of 4.26 percent in real R&D effort experienced since 1976.

For industry overall, support of R&D is forecast to be $83.8 billion, up 7.2 percent, while Federal support is expected to total $59.5 billion, up 7.8 percent. Funding by academic institutions is expected to be $2.75 billion and other non-profit organizations will provide $1.45 billion.

The $10.8 billion spent by the chemical industry on R&D ranks behind aerospace ($23.8 billion) and electrical machinery and communications ($21.4 billion), but ahead of machinery ($10.1 billion) and autos, trucks and other transportation equipment ($6.7 billion).

Dow Corning Buys Specialty Products

Wickhen Products, Inc., a supplier of specialty chemical materials to the cosmetic, pharmaceutical and allied industries, has been acquired by Dow Corning Corporation for an undisclosed sum, it was announced last week.

Wickhen has headquarters and manufacturing facilities in Hugenot, N.Y. and its Recon research and development center in Montgomery, N.Y. It will operate as a wholly-owned subsidiary continuing to serve the needs of its customers and evolve as an East Coast Service Center for Dow Corning.

Dow Corning personal and household care industry manager Jere Marciniak said, "We are excited about the synergy created by the acquisition which will benefit the industries and customers both companies served.

"Wickhen's proven capabilities in active antiperspirant salts, fine esters and unique polymer systems fit nicely with the silicone technology, products and services we offer," Marciniak noted.

India in Potash Talks

The Indian government is reportedly holding talks with Canadian officials on taking an equity stake of 20 to 25 percent in a planned potash mine in Manitoba. India is said to be insisting on paying for its interest in the $400 million project in the form of trucks and equipment, rather than hard currency.

Monsanto Sees Dumping Duties

Monsanto Company expects "substantial" antidumping duties to be imposed on industrial phosphoric acid from Belgium and Israel.

The company's comments followed a ruling by International Trade Commission that dumping petitions filed by Monsanto and FMC Corporation are supported by sufficient evidence to justify further investigation.

The commission said it found a reasonable indication that US producers of industrial phosphoric acid have been injured materially or have been threatened with material injury by the imports. The Commerce Department will now launch a full-scale investigation of the dumping complaint.

"We believe the dumped material is being sold at prices in the US lower than those at which it is sold in Belgium and Israel and that the exporting firms are receiving unfair subsidies from their governments," Monsanto said last week.

Monsanto said its share of the market has declined, prices for the product have fallen and the company has been forced to close a production unit in Kearny, N.J. Monsanto continues to make phosphoric acid at four other plants in the US.

Exxon Chemical Starts Resin Unit

Exxon Chemical last week noted the on-schedule startup of an additional plant manufacturing its "Escorez 5000" series of hydrogenated resins. The new plant is located at Exxon's Baton Rouge Chemical company and complements its existing facility in France. according to the company, it was built in response to increased demand worldwide for water-white tackifiers for adhesive and sealant polymers.

"The plant reflects our commitment to the adhesives and sealants industries," claims James J. Protulipac, adhesion products manager. "It provides our customers with a US source for these resins, which together with our plant in France strengthens our ability to meet the needs of our customers worldwide.

"Because the US plant was designed for easy expansion," he adds, "we'll be able to move rapidly as new hydrogenated resins are ready for commercialization and as demand increases for these specialty resins."

Ruhrchemie Expands Polyethylene Units

Ruhrchemie AG, the Oberhousen, West Germany subsidiary of Hoechst AG, is expanding its production facilities for ultra-high-molecular-weight polyethylene to 20,000 tons a year.

Hoechst also produces the resin at the Bayport, Tex., complex of American Hoechst Corporation. Ruhrchemie says Hoechst's company-wide production capacity for UHMWPE is 32,000 tons.

The material is used in the mechanical engineering field, linings of bunkers and transport containers, implantation surgery and the sports sector (artificial ski slopes, skittle alleys.)

Fike Corporation Enters Joint Venture

Fike Corporation, Blue Springs, Mo., says it has formally joined Fauske & Associates, Inc., Burr Ridge, Ill., in a "unique arrangement where each company supports the other" to provide products and services related to Emergency Relief System (ERS) design for the chemical, petrochemical and other process industries.

Fike, with support from FAI, says it provides a broad range of laboratory apparatus and testing services for ERS purposes. It recently developed "vent sizing Package" test equipment and methodology that are used to obtain data for sizing safety and relief valves, rupture disks, and other relief devices.

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Abbott Laboratories has elected Duane L. Burnham (left) vice-chairman and Jack W. Schuler president and chief operating officer. They were most recently executive vice-presidents. Mr. Burnham will continue as chief financial officer in addition to new corporate responsibilities and Mr. Schuler will be responsible for all Abbott domestic and international business units.

Advanced Materials Firms Are Hot Acquisition Targets

An industrial revolution is taking place among the nation's high-tech companies that will soon make metal door knobs and aluminum beer cans as obsolete as the old-fashioned milk bottle, according to a study by JACA Corporation, Fort Washington, Pa.

The study forecasts that firms producing so-called "advanced materials" will double their present sales by 1990.

One-hundred fifty of these firms—mostly privately held—were analyzed in the study and found to be the "hottest acquisition" candidates for companies seeking diversification and growth.

The firms, says company president James Commins, produce the goods that are designed to replace ordinary metal products of all kinds.

These advanced materials are being used in such common, everyday commodities as golf clubs, bicycle frames, auto parts, body implants and even bridges.

The researchers have come up with what Mr. Commins calls "a shopping list" of unpublished and, rarely published facts on sales, manufacturing, technology and marketing that can help a CEO better locate his best acquisition options or his most suitable partners for joint ventures. The research also can help a company evaluate a competitor, or arrange a licensing deal for the new technology.

Who are these companies?

Mr. Commins describes them as "industrial sleeping dogs" and while the names of the firms are available only to those who buy the report, JACA says the companies have sales of $3 million to $100 million annually, fall into three categories—advanced composites, high performance ceramics, and high performance metals—and are primarily privately-held American manufacturing firms which produce for end-use markets.

Sales in one of these technologies—advanced composites—will grow at an annual rate of 22 percent a year. By 1990, sales will reach $3.9 billion, compared to $1.45 billion last year.

"We're in the days of a collapsing market, except in these industries," Mr. Commins observes. "What other business area do you know of that will double in four years?"

The study forecasts that the aerospace and the commercial and private aircraft industries will incorporate more composite parts.

Continued on Page 14

Leprosy Drug Approved For Use in the US by FDA

Food & Drug Administration last week approved a new drug to treat a form of leprosy that has grown increasingly resistent to other drug treatments.

Clofazimine will be marketed in capsule form under the trade name "Lamprene" by Ciba-Geigy Corp., which has made it available as an investigational drug to about 6,000 US patients since 1966.

The drug has been in use for more than a decade in other parts of the world where there are about 12 million cases of leprosy, or Hansen's disease. But there had been little incentive to win approval in the US, where several thousand cases were treated with other drugs.

However, with bacterial resistance increasing to other drugs, the Public Health Service's national Hansen's Disease Center in Carville, La., carried out two studies on clofazimine, and FDA designated it an "orphan" drug, providing incentives to develop, study and manufacture an otherwise unprofitable therapy.

"Clofazimine not only acts to clear the unsightly lesions of leprosy, but also suppresses infectiousness so that patients can circulate freely and function in society," says FDA Commissioner Frank Young. The drug inhibits the growth of the bacteria that cause the disease.

Clofazimine is usually given with one or more other anti-leprosy drugs, for lepromatous leprosy, which is characterized by skin lesions that enlarge and spread and by nerve involvement that may cause loss of sensation and paralysis. The disease also can cause severe deformities and damage the eyes, kidneys, testes and membranes of the mouth, nose and throat.

The control and effective treatment of leprosy has changed dramatically over the past 45 years as drug therapy has become available. Early detection and treatment of the disease can prevent it from developing into a highly infectious type of leprosy and avoid physical disability and disfigurement.

With appropriate treatment, infectiousness is suppressed so that patients pose no risk to their families or other members of the community. In addition, patients can be treated at home rather than being confined to costly leprosariums. Long-term treatment usually is necessary.

Leprosy has been known from Biblical times, but its bacterial cause was only discovered just over a century ago. The disease is not yet entirely understood, and research continues.

Himont to Offer Shares to Public

Himont Inc., the Wilmington, Del.-based polypropylene joint venture of Hercules Incorporated and Montedison SpA of Italy, said Wednesday afternoon (December 24) that it plans an initial public offering of 12.5 million shares of common stock, equal to a 20 percent ownership in the company.

A registration statement relating to the securities has been filed with Securities & Exchange Commission, but has not yet become effective.

A Hercules spokesman said last week that details about the offering price of the securities and how the proceeds from the sale will be used cannot be disclosed until a formal prospectus is issued.

The offering will be made simultaneously through two underwriting syndicates led by Wertheim & Co. Inc., First Boston corporation and Goldman Sachs & Co. in the US and Wertheim & Co. UK Ltd., Credit Suisse First Boston Ltd. and Goldman Sachs International Corporation abroad.

Himont has granted the US underwriting syndicate an option to purchase up to an additional 1.875 million shares.

Upon completion of the offerings, Hercules and Montedison will each own approximately 40 percent of the outstanding shares of Himont common stock.

In addition to the public offering, Hercules also said last week that Alexander F. Giacco will serve as full-time chairman and chief executive officer of Himont.

Mr. Giacco early announced plans to retire as chairman, president and chief executive officer of Hercules, effective March 24, 1987. He has been chairman of Himont since its formation.

R. Michael Hendricks will continue as president and chief operating officer of Himont.

The Hercules-Montedison venture, formed in November 1983, is a worldwide manufacturer and distributor of polypropylene and polypropylene-based products. The venture claims to be the world's largest producer of polypropylene.

Alexander F. Giacco

'Bendectin' Award Overturned In Federal District Court Ruling

A Federal judge in Washington, D.C., has overturned a $1.16 million judgment against Merrell Dow Pharmaceuticals Inc. in connection with the anti-nausea drug, "Bendectin."

The overturned jury verdict had been entered on September 18, 1986, in favor of a 10-year-girl after a seven-week trial. Merrell Dow said the award was granted to the child and her parents despite the fact that the jury found that "Bendectin" was neither defective nor unfit and that Merrell Dow was not negligent.

In a 14-page opinion, Federal Judge Thomas P. Jackson of the US District Court for the District of Columbia, stated, "No reasonable jury could find on the basis thereof that this infant plaintiff's birth defects were more likely than not to have been caused by her intrauterine exposure to 'Bendectin.'"

In his opinion, Judge Jackson referred to the "now nearly universal scientific consensus" that "Bendectin" has not been shown to be a teratogen, adding that "reasonable jurors could not reject that concensus without indulging in ... speculation and conjecture."

Among the experts testifying on behalf of Merrell Dow at the trial were: Dr. Raymond Seltser, dean and professor of epidemiology, School of Public Health at the University of Pittsburgh; Dr. Charles Epps Jr., professor of orthopedic surgery, Howard University; Dr. Kenneth Rosenbaum, director of the genetics laboratory, Children's Hospital National Medical Center in Washington, D.C.; and Dr. James Goddard, former commissioner of FDA.

To date, there have been eight other trials involving "Bendectin" in the US. In March 1985, a jury in a trial in Federal court in Cincinnati, which included approximately 1,150 plaintiffs, ruled that "Bendectin" did not cause birth defects. In four trials involving single plaintiffs; 1981, 1985 and 1986 two jury verdicts were in favor of Merrell Dow. In two others in 1986 one ended in a mistrial

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Asbestos Coalition Joins Du Pont, Carbide, Other Firms

A coalition to promote the availability and use of safe, effective alternatives to asbestos has been formed by E.I. du Pont de Nemours & Co., Union Carbide Corp., Standard Oil Company, Ashland Oil and Rhodes-American.

"Increasing public awareness of health problems associated with asbestos has stimulated leaders in various segments of industry to begin the transition away from asbestos to non-asbestos alternatives," says Du Pont's Thomas F. O'Brien, a spokesman for the new Alternative Materials Institute.

"As this transition to non-asbestos materials gains momentum," he says, "government, industry and consumers need up-to-date information about the availability of alternatives to asbestos in such key end-uses as automotive brakes and transmissions, gaskets and packings, and adhesives and sealants." Some 30 percent of the automotive brakes used in the US now are made with alternatives to asbestos. "Unfortunately, the fact that this transition has already begun seems to be one of the best-kept secrets around," says Mr. O'Brien.

Although many uses of asbestos have been curtailed or discontinued, asbestos continues to be used in a wide variety of industrial, commercial and residential applications.

EPA has proposed to ban most asbestos uses. In 1985, about 450 million pounds of the product were consumed in the US — almost all of it imported.

Mr. O'Brien says examples of alternatives to asbestos include aramid fibers, ceramic fibers, carbon fibers, flexible graphite, steel fibers and various other mineral and man-made fibers.

Dr. Sidney Wolfe

CH_2Cl_2 Limit Urged by Union For Workplace

United Auto Workers says "there is no justification" for Occupational Safety & Health administration's delay in acting on the union's petition for an emergency standard on methylene chloride to lower the permissible workplace exposure level.

The union called for immediate action after the Labor Department unit denied the UAW petition and announced it would carry out a lengthy rule-making process before making a decision on the chemical.

Dr. Frank Mirer, director of UAW's safety and health program, says he hopes new OSHA director John Pendergrass moves quickly on adopting a new standard.

"To live up to the promises already made, he will have to provide faster action in completing the rulemaking than it took to start it," he says.

Dr. Mirer complained that the 16 months it took OSHA to deny the union's petition was too long and the projected date for final action is another year and a half away. "This is far too long given the gravity of the public health risk. We are going to do everything we can to speed up the timetable," he says.

Dr. Mirer says that since the union's peti-

Continued on Page 17

Korea Steel Starts Output At New Units

Korea Steel Chemical Company, a member of the Daewoo Group, has started production of carbon fiber and a new family of water-soluble resins at Pohang, South Korea. The company has invested about $17 million in the two plants.

Capacity of the $10 million, polyacrylonitrile-based carbon fiber plant is 150 metric tons annually. South Korea's consumption of carbon fiber reached 120 tons last year and is expected to grow at the rate of about 20 percent a year, the company says.

While initial emphasis will be on domestic sales, Chan-Wook Kim, president of Korea Steel Chemical, says the company intends to develop an export market in the near future. Kosco is also trying to develop new technology that would allow it to utilize coaltar pitch, a lower cost raw material. The pitch is available from an existing plant at Pohang.

The $7 million water-soluble resins plant has annual production capacity of 1,500 tons a year. Most of the product, to be sold under the "Carbosense" trade name, will be exported to the US, Europe and Southeast Asia.

Kosco, the only producer of coaltar-based chemicals in Korea, also produces agrichemicals, bulk pharmaceuticals and hexachlorophene. Sales in 1985 totaled about $91 million, including exports of $58 million. Sales of the Daewoo Group were in excess of ... billion.

Vaccine Shortage Feared as Result Of Gov't Campaign

An influenza vaccine is in short supply, leaving many people in the high-risk group unable to be immunized because of faulty government and drug industry warnings about this Winter's new strain of "Taiwan A" flu, a public health group charged last week.

Dr. Sidney Wolfe, director of Public Citizen Health Research Group, said he has received nationwide reports indicating that so many people outside the proper high-risk group have sought and received the vaccine that supplies are low, and in some cases, have been exhausted already.

The problem arose in October when Dr. Robert Windom, assistant secretary for Health & Human Services Department, issued recommendations about who should get the vaccine at a news conference sponsored by the National Foundation for Infectious Disease, an organization largely funded by the drug industry.

Newspapers around the country quoted Dr. Windom as saying the vaccine should be taken by the elderly and those under 35. But according to the Federal Center for Disease Control in Atlanta, the Taiwan flu vaccine is recommended only for those under 35 who also suffer from chronic diseases such as heart and lung ailments, diabetes, anemia, asthma and kidney disfunction.

CDC's immunization practices advisory committee says most people over 35 were exposed to the virus when it was last prevalent in the 1950's and still carry protective antibodies.

Dr. Wolfe called the news conference a "blatant disinformation campaign carried out by the industry-funded NFID." William Small, the executive director of NFID, conceded that news reports of the conference carried erroneous information, but denied there was an effort to misinform the public.

In a letter to HHS Secretary Otis Bowen, Dr. Wolfe said Dr. Windom "displayed his ignorance about flu" when he gave the media incorrect recommendations.

"This backwards program promoted by a

Continued on Page 41

Fiber Optic Sensors to Grow

Despite sluggish conditions in capital equipment markets, every segment of the fiber optic sensor market is enjoying exceptional growth, according to a new research report by International Resource Development, Inc., a consulting firm located in Norwalk, Conn.

The company projects the US market will grow more than tenfold over the next eight years, to more than $400 million in 1995. This compares with US shipments of $30 million in 1986, the company says.

Fastest growth, according to the report, will be in "hostile" applications, where the relatively high cost of fiber optic sensors is justified by their resistance to rugged environmental conditions such as extremely high temperatures and electromagnetic interference.

Major applications in hostile environments are being found in the military/aerospace, energy and metals, transportation, petroleum, and chemicals and plastics industries. Particular applications include sensor systems for nuclear reactors, conventional power generating equipment, turbines, jet engines, petroleum and chemical processing plants and other industrial environments characterized by extreme temperatures, highly flammable materials, toxicity and other unstable conditions.

The study points out some of the advantages fiber optic sensors offer in hostile environments. For instance, fiber optic versus mechanical or electrical sensors are characterized by immunity to electromagnetic interference (EMI), radio frequency interference (RFI) and radiation,

Continued on Page 20

Textile Industry Had Better Year In 1986, But Still Sees Problems

The textile industry in 1986 showed some improvement over the past year, but a record level of textile and apparel imports kept a lid on the industry's economic recovery.

The industry's annual economic report, compiled by the American Textile Manufacturers Institute, shows that 1986 textile shipments, valued at $54.7 billion, were up 4 percent over 1985. Textile imports increased 17 percent over 1985.

Imports of textiles and apparel combined reached an all-time high of 12.7 billion square yards in 1986 and the textile and apparel trade deficit of $21.6 billion was another record. It was the sixth successive record year for textile and apparel imports.

For the first time, imports of apparel and apparel fabric captured more than half of the domestic market in 1986, as market penetration reached 52 percent, according to the industry group.

Textile industry employment showed a one percent gain, averaging 708,000 in 1986 compared to 704,000 in 1985. At the same time, average hourly wages increased 3 percent to $8.93 per hour.

Textile industry earnings on sales were at 3.8 percent during 1986 compared to 2.4 percent in 1985. Industry investment in new plants and equipment was down four percent for the year to $1.7 billion.

"Import growth has averaged over 20 percent a year during the past five years," says ATMI president Dewey L. Trogdon. "Because the market is barely growing and imports continue to climb, the industry's improved situation could be very short-lived.

"We are absolutely convinced that the industry's growth prospects and even its survival over the longer term are threatened unless our government takes the necessary steps to slow the growth of imports," Mr. Trogdon says.

"It is clear that we must have a legislative solution to the problem and we will be working with Congress on the introduction of legislation early next year. This legislation will accomplish what President Reagan promised but never came close to achieving. It will relate import growth to domestic market growth.

"For 1986, industry capacity utilization has averaged around 90 percent," he said. "This is to be expected in light of the plant closings and a 9 percent shrinkage of the industry's capacity over the past five years. If this amount of capacity had not been written off, our operations would be running at close to 90 percent of capacity," he said.

"While industry profits as reported by the government are well ahead of a year ago, 1985 was a depressed period for industry production and sales," he said. "Industry profits almost always improve as shipments increase, but we do not know how much longer this can be sustained with virtually no market growth and continued high import growth."

OSHA Cites Shell Oil Co. At Deer Park

Occupational Safety & Health Administration last week cited Shell Oil Company's complex in Deer Park, Tex., for 81 alleged instances of willfully violating Federal recordkeeping requirements and proposed a $4,000 fine for each.

OSHA also cited the firm for three alleged serious violations of respirator, hazard information, and shower and wash facility requirements and proposed $960 in penalties, bringing the proposed fines to $244,960.

Shell denied any wrongdoing and said it would contest the allegations. The company has 15 days to challenge the citations and the proposed penalties before the Independent Occupational Safety and Health Review Commission.

"We continue to be concerned that some employers are ignoring OSHA's injury and illness reporting requirements, and when we find apparent willful recordkeeping violations, we will respond accordingly," said John A. Pendergrass, assistant secretary of labor, who heads OSHA.

In recent months, the agency has cited several companies for similar alleged recordkeeping violations, including Union Carbide, Chrysler, Fina Oil & Chemical Co., Du Pont, Monsanto and USX.

The alleged violations at Shell involved several types of injuries, including burns; back, cervical, groin and shoulder strain; contusions; and inhalation of toxic substances.

The citations resulted from an inspection which began June 16 at Shell's hydrogen sulfide manufacturing units at Deer Park as

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Damon Biotech Breakthrough Wins US Patent

Damon Biotech, Inc., a majority-owned subsidiary of Damon Corporation, says the US Patent & Trademark Office has approved a patent for the company's cellular enhancer technique, a technology for large-scale production of new biological products.

Damon Biotech claims it has already applied its cellular enhancer technique successfully to the production of tissue plasminogen activator (t-PA) and pro-urokinase.

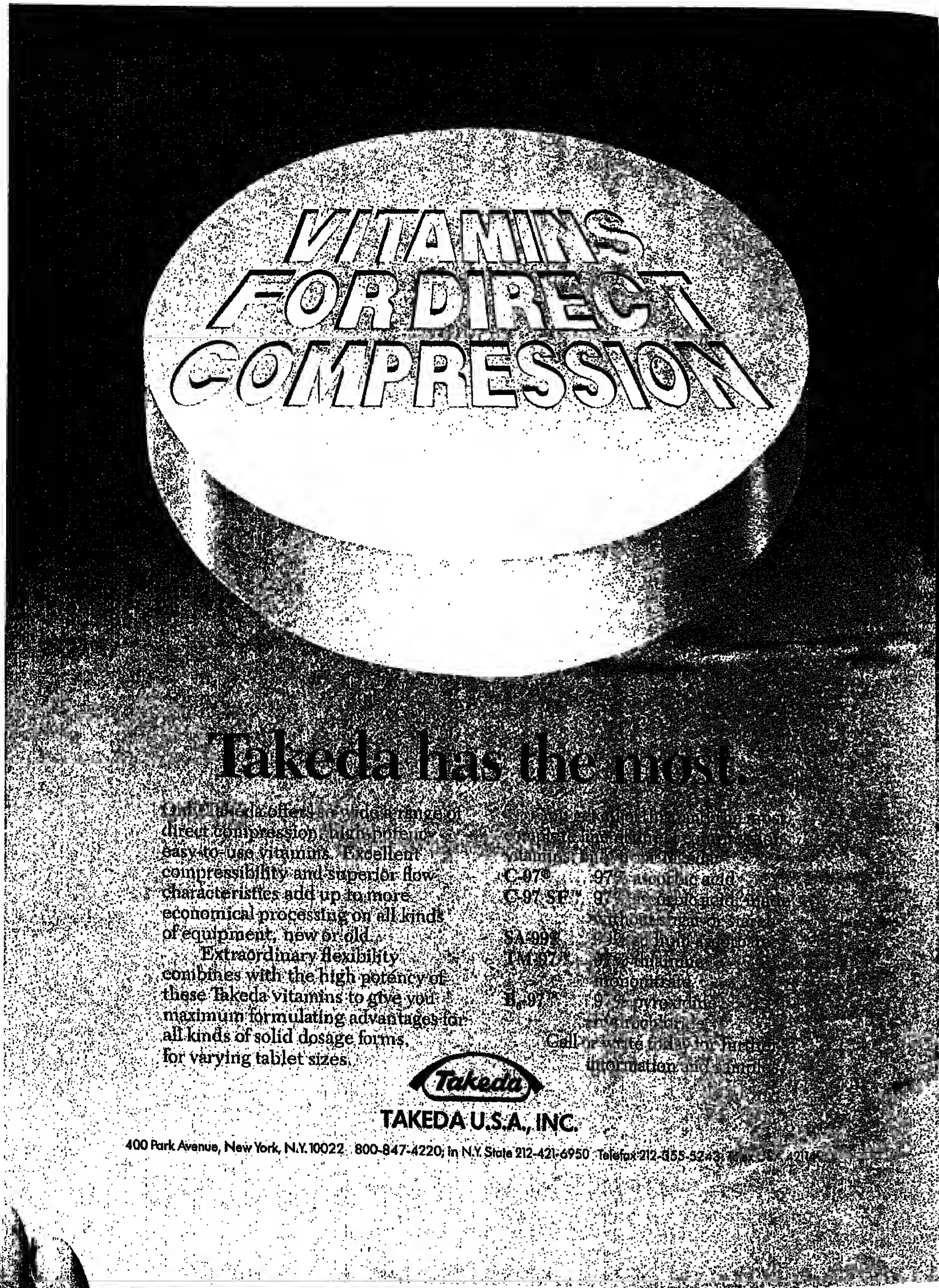
"The cellular enhancer technique can be combined with our patented "Encapcel cell growth system to form an integrated manufacturing process for the production of biological products such as t-PA," says Robert P. Schneider, president and chief operating officer of Damon Biotech.

"We are already using this process to produce quantities of t-PA for pre-clinical trials and believe that this process will allow us to produce t-PA in greater quantities and at lower costs than competing companies. We are very pleased with the broad legal protection which this patent will afford for the process."

The cellular enhancer was discovered at the Massachusetts Institute of Technology and licensed exclusively in the United States to Damon Biotech.

A cellular enhancer is a sequence of genetic material, which, when combined with the gene for the desired biological product, significantly increases the production of that product from a mammalian cell. The patent will cover all tissue specific mammalian cell enhancers.

Mammalian cells are the most desirable production vehicles for many of the new biological products being developed by the biotechnology industry. However, these cells are difficult to grow in quantity and they produce a relatively small amount of product, which has made large-scale production difficult.



News Capsule

Dow Case Extended

Dow Chemical Company and Consumers Power Company have asked for, and obtained, an extension of the recess in the trial between the companies until the end of January 1987. The two say "significant" progress has been made in negotiations required to form a partnership to convert the idled Midland, Mich. nuclear plant into a natural-gas fueled, combined cycle cogeneration plant.

Capsule Unit Started

Warner-Lambert Company says construction has started on a plant at Suzhou, China, to produce empty hard gelatin capsules used in pharmaceutical manufacturing. The company signed a $14 million joint venture for the plant with China National Corporation of Pharmaceutical and Chemical Cooperation in July. Warner-Lambert will supply the machinery and technology necessary to produce capsules.

Adhesives Unit Sold

National Starch & Chemical Corporation has acquired Bassi Marchini & C. Spa, industrial adhesives maker in Mezzago near Milan, Italy. Terms were not disclosed. The Italian firm markets a range of products, including polyvinyl acetate and hot melt adhesives to the packaging, converting, bookbinding and woodworking industries.

Kemira-Superfos Pact

Kemira Oy, Finland's state-owned fertilizer and chemical company, will take a [illegible] percent interest in a new fertilizer subsidiary being set up by Denmark's Superfos. Sales of the new unit, to be called Superfos Fertilizers, are expected to total about $200 million in its first year of operation.

Asarco Opens Center

Asarco Inc. has established a technical services center in Salt Lake City, Utah to provide consulting services in various areas, including engineering, environmental sciences, research and security. The center consolidated Asarco's departments of environmental sciences, research and engineering into a single unit.

Dow Aids Fund

Dow Chemical Company says it will award more than $400,000 this year in matching grants to the Presidential Young Investigators program administered by the National Science Foundation. The program supports the research of outstanding young science and engineering professors. The program began in 1984 and nearly 100 of the 500 winners to date are pursuing chemistry or chemical engineering research.

BP Develops Coating

BP Chemicals says it has developed an anti-corrosion coating and sealant system which can be applied underwater. The new product is intended primarily for subsea maintenance in the offshore energy industry.

Martin Marietta Sells

Martin Marietta Corporation has agreed to sell an alumina refinery on St. Croix to an Omaha businessman for $45 million. The sale will mark the company's final withdrawal from the aluminum business.

Kenneth N. Kermes, who has been named executive vice-president of SmithKline Beckman Corporation. He was most recently executive vice-president of finance and corporate development at Black & Decker.

FTC to Hoechst: More Information

Hoechst AG's acquisition of Celanese Corporation could be delayed until after the new year, when scheduled changes in the US tax code would make the deal less attractive to Celanese shareholders.

Hoechst's US subsidiary, American Hoechst Corporation, said last week that it has already supplied "voluminous material" in response to a second request by the Federal Trade Commission for additional information concerning the proposed merger, but that the FTC wants more.

For that reason, American Hoechst said, it could not give any assurances that the $2.8 billion tender offer for Celanese could be completed by the end of this year. Capital gains will be treated less favorably when provisions of the new tax law take effect January 1.

American Hoechst said it had been advised by Celanese that some of its officers and directors are seriously considering selling some or all of their shares in the market on or prior to December 31 in order to recognize long-term capital gains this year.

The tax implications of a delay of the merger until 1987 is a "variable that cannot be dismissed," according to Jay Meltzer, chemical analyst at Goldman Sachs & Co. But he adds that there are "still so many more pluses than minuses" about the deal that even if it is postponed until next year, it still looks good.

Hoechst launched a cash tender offer for all 11.1 million outstanding shares of Celanese stock in early November for $245 per share. Hoechst is also offering $172.40 per share for all outstanding shares of Celanese convertible preference stock and $102 per share for all the company's 7 percent preferred stock.

American Hoechst said on Wednesday (December 23) that it was further extending the expiration date of the tender offer until the close of business today (December 29). Shares previously tendered could be withdrawn.

As of the end of the business day last Monday (December 22) approximately 9.7 million shares of Celanese common stock had been tendered to Hoechst, along with 13,864 shares of convertible preference stock and 20,466 shares of 7 percent second preferred stock.

Analysts who saw synergism in the combination of the companies' polyester fiber operations say that is probably what concerns the FTC about the merger of Hoechst and Celanese.

The merger would make Hoechst the largest US producer of staple polyester and the second largest maker of filament fiber.

Urea From East Dumped in US, Commerce Says

The Commerce Department ruled last Wednesday that the Soviet Union, Rumania and East Germany sold urea in the US at prices below the cost of production, it was reported last week.

The ruling requires importers to post bond with the US Customs Service equal to 64.9 percent of the value of Soviet urea, 144.11 percent of East German urea and 53.71 percent of Rumanian urea.

The decision was prompted by a petition of the Ad Hoc Committee of Nitrogen Producers. The producers allege that shipments of East Bloc urea have risen to more than 22 percent of the US market, from about 3 percent in 1982.

The Commerce Department must make a final ruling before March 10 and may adjust the dumping margins at that time.

The International Trade Commission then has 45 days to decide if the Eastern-bloc urea has injured American producers by driving down prices and reducing domestic employment. The commission made a preliminary ruling of injury in August.

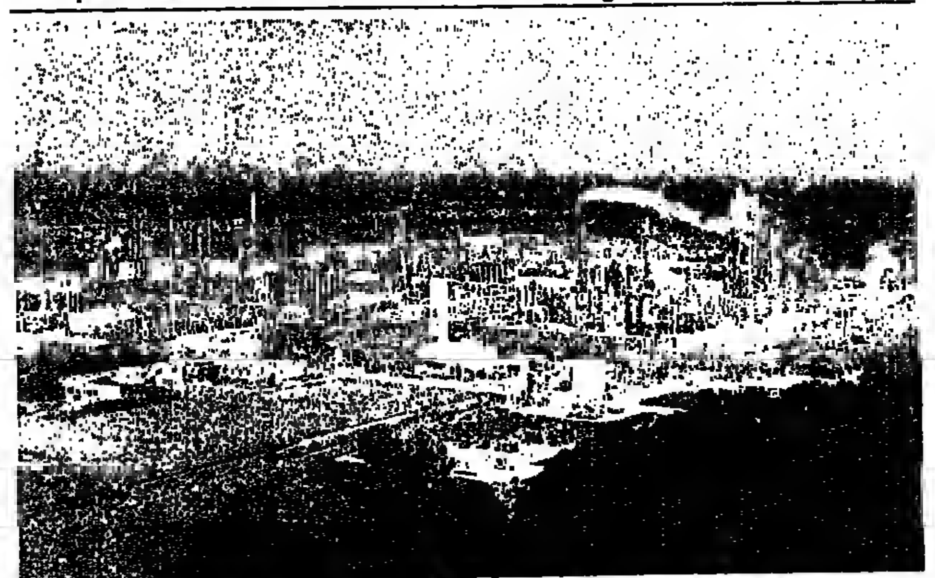
Sterling Drug Buys OTC Firms In France, Italy

Two European over-the-counter pharmaceutical companies have been acquired by Sterling Drug, Inc., it was announced last week by John M. Pietruski, chairman and chief executive officer of Sterling.

Financial terms of the transaction were not disclosed, but the two companies are said to have combined sales of close to $30 million annually.

The two companies are Laboratoires Valda, a family owned company founded in Paris in 1902 with manufacturing facilities in France and Italy, and Laboratoire du Docteur Furt, a company based in Bordeaux. According to Mr. Pietruski, the acquisitions "are important steps in Sterling's stated goal to strengthen the company's presence in these two key country markets.

Sterling says that Valda pastilles are well-known throughout Europe, are market leaders in both France and Italy, and have strong export sales. The company also makes and markets medicated gums.



SHELL AT GEISMAR: Shell Chemical Company plans to build a second linear higher olefins unit at its Geismar, La., plant. The new unit, based on Shell's higher olefin process (SHOP) technology, will have an annual capacity of 535 million pounds of alpha olefins, as well as internal olefin capacity. With the expansion, Shell's overall capacity will exceed 1.3 billion pounds at Geismar.

DuPont Sells Off Polyester Lines, Citing Change in Strategic Needs

E.I. du Pont de Nemours & Co. has completed the sale of its worldwide business for "Reemay" spunbonded polyester and the US-based business for "Typar" spunbonded polypropylene.

The buyer of these units is Reemay, Inc., an affiliate of InterTech Group of Charleston, S.C., a diverse group of manufacturing, specialty and other operating companies. Terms were not disclosed.

The sale includes manufacturing facilities for these products at Old Hickory, Tenn., as well as associated patents, technology and inventories. Not included is a manufacturing facility for "Typar" in Luxembourg and the European-based business for that product.

About 375 employees are involved in the production of "Typar" and "Reemay" at Old Hickory. The InterTech affiliate is filling most of its employment needs from Du Pont personnel.

"Du Pont is selling these US-based businesses because they no longer fit the company's long-range business objectives," says Michael B. Emery, director of the Engineered Nonwoven Structures Division in Du Pont's Textile Fibers Department. Jerry Zucker, chairman and chief executive officer of Reemay, Inc. and The InterTech Group, Inc., says, "Reemay views this acquisition as a significant part of a broad strategic plan to expand into specialty markets associated with spunbonded nonwovens and related InterTech products."

Mr. Emery says, "Du Pont will continue to compete in the nonwovens market with 'Tyvek' spunbonded olefin, produced at the Spruance plant in Richmond and a new plant under construction in Luxembourg, and Old Hickory's 'Sontra' spunlaced fabric, which serve different market segments and are strategic to Du Pont's long-range plans."

He says the European business for "Typar" is a strong performer in a distinctly different and more stable market primarily oriented to carpet backing. "The European carpet market favors products for which the properties of 'Typar' as a backing are valued," he adds.

Primary US markets for "Typar" are geotextiles, furniture, bedding and carpet backing. "Reemay" is sold mainly to the filtration and interliner markets.

Principal applications for "Tyvek" are courier packs, envelopes, maps, tags, labels, foil packaging laminates, sterile packaging, house construction wrap, and protective disposable and limited use garments.

Major uses for "Sontara" comprise aramid substrates for safety apparel and composites, home furnishing face fabrics, interlinings and limited use medical apparel, sponges and dressings and wipes.

Peanut Oil Prices Slip Further; Buyers Backing Out of Market

Peanut oil prices slipped further to around 25 cents per pound toward the end of last week. The high price and low quality of peanuts has been prompting buyers of the oil to back out of the market, forcing oil prices down 6 to 7 cents per pound over the past six weeks.

Last year's huge peanut crop of 4.1 million tons caused a glut of oil to flood the market, driving peanut oil prices down to 18 cents per pound — a level comparable to soy and corn oil prices.

The unusually low peanut oil prices unleashed a buying binge which, in turn, brought pricing back up to a level that could not be sustained.

Imported oil from Europe became cheaper than the US product, sources note. "Even with the 4-cent duty charge, the buyers were paying 1 to 2 cents less than US oils," one says. "There was a panic selloff about two weeks ago and that ran prices back down."

A severe drought over the Summer ravaged this year's peanut crop, which is 16 percent below last year's yield, but sources speculate that there is still surplus oil left from 1985.

"It was assumed that the surplus oil from the 1985 crop was sold in the Fall," says one source, but "it could be that suppliers are now having difficulty because it wasn't sold and nobody needs any more peanut oil."

BUYERS HOLDING OUT

Another source believes the slowdown in trade is due largely to buyers holding out for the Commodity Credit Corporation to unload their inventory. The CCC reportedly has 54,412 tons of peanuts to dump into the market, with 10,000 edible segregation 1 peanuts and 40,000 segregation 3 to be crushed. "Most of the purchasers know how much CCC has in stock and will wait until the crop goes out," says a USDA source. "They just don't bid now and suppliers are forced to lower their prices in an attempt to sell their stock."

"It is fairly normal for markets to go down at this time of the year," says another source. "The CCC usually offers its stock at the end of December, beginning of January. They like to dispose of their entire supply by May."

Once buyers realize there is no more coming from the CCC the price should increase. However, with 1985 oil still around prices probably won't skyrocket. "Buyers won't pay too high a price and sellers probably won't want to sit on the peanuts with some of last year's stuff still around, but the price will most definitely go up some," says a source.

LATEST SPOT PRICES

MARKET CLOSE DEC. 26, 1986

CRUDE VEGETABLE OILS		
Coconut oil, NY	lb.	.20
Coconut oil, Pacific	lb.	NA
Corn oil, Midwest	lb.	.23
Cottonseed oil, Valley	lb.	.16
Linseed oil, Minneapolis	lb.	.25
Palm oil, NY	lb.	.16
Peanut oil, Southeast (restricted)	lb.	.25
Soybean oil, Decatur	lb.	.16½
REFD. VEGETABLE OILS		
Coconut oil, l.w., NY	lb.	.29½
Corn, jumbo tanks	lb.	.3105
Cottonseed oil, jumbo tanks, NY	lb.	.27
Peanut oil, jumbo tanks, NY	lb.	.2206
Soybean salad oil, NY	lb.	.1945
OILMEALS		
Cottonseed, 14% bulk, Memphis	ton	$155
Linseed, extracted, 34% bulk, Fargo	ton	$110
Peanut, 50% bulk, SE, Alabama	ton	$175
Soybean, unrest., 44% bulk, Decatur	ton	$142.90
FATS & GREASES		
Grease, white, choice, tanks, dlvd., NY	lb.	.13
Grease, yellow maximum 10%, ffa tanks	lb.	.11¾
Lard, loose, bulk tanks, dlvd., Chicago	lb.	.14½
Tallow, inedible, fancy, tanks, dlvd., NY	lb.	.14½
Tallow, inedible, bleh., tanks, dlvd., NY	lb.	.14½

VEGETABLE OILS

OLIVE OIL — Italian B olive oil has dropped to $5.35 per gallon in drums after remaining fairly steady during the months of October and November at $5.40 to $5.50. The market price for the Spanish oil was $4.06 per pound in gallon drums and holding steady.

The use of chemicals in extracting the B oil has been prohibited, forcing producers to repeatedly press the olives to get the oil. The method may be tedious but it is less expensive and produces different grades of oil in each press. The first pressing produces top grade virgin oil, the second is a lower grade and the third is lower yet.

PRICES TRENDLINES

WEEK ENDING DEC. 26, 1986

CHANGES/UP

Corn oil, Midwest, ¼c. per pound
Soybean, 44% bulk, Decatur, $4.10 per ton
Soybean oil, Decatur, 1c. per pound.

CHANGES/DOWN

Coconut oil, NY, ½c. per lb.
Cottonseed, 41% bulk, Memphis, $5 per ton
Peanut oil, Southeast (restricted), ½c. per lb.

OILS, FATS INDEX

The Oils, Fats & Waxes index reflects the prices of 11 representative materials in this sector and the quantity of each produced in 1985.

Dec. 26, 1986	151.65
Dec. 19, 1986	80.00
Nov. 28, 1986	80.75
Dec. 27, 1985	89.83

Chemical Prices Start on Page 24

FATS

LARD — Lard was trading at 14½c. per pound toward the end of last week, rising 1c. in the past three weeks.

Sources attribute this to a high export rate with hog slaughters on the down side. "If the kill is light then there is less lard produced," says a source, "Usually the kill is heavier. The slack has boosted the price."

A health conscious public has become increasingly aware of its cholesterol intake, causing many fast food chains to replace animal fat with vegetable shortenings. Now most of the lard is exported, with Mexico being a big buyer.

TALLOW — The tallow market is currently up 1c. per pound, with inedible fancy tanks priced at 14½c. per pound and inedible bleach tanks at 14½c. per pound, both based on New York delivery.

Suppliers report a fairly high demand and tight supply. "Around Christmas people usually eat more turkey than beef," says a source. "This lessens the slaughtering of cattle and naturally cuts down on the amount of tallow produced."

With palm oil now between 1½c. to 1½c. per pound higher than tallow and with the high price of coconut oil, buyers are turning to tallow once again. Egypt purchased a large supply of tallow a few weeks ago, taking a large chunk out of the current supply and consequently affecting the price. In addition, exporters who oversold two and three months ago, based on high production levels at the time, are coming into the market to cover the sales in a period of slack production.

Sources report the market on the firm side and holding steady.

MDI Producers

from Page 3

...ow the benzene market fairly ...y, prompting some MDI producers ...y that a price increase on their ...ct may be warranted in the first ... of 1987 as a pass-along of higher ...stock costs.

...ever, one producer says he expects ... MDI pricing until the second half of ...year despite rising raw material costs. ...ifficulty in getting prices up," he says, ...so "margins are going to be under pressure."

...ducers look ahead with considerable ...nd to potentially strong growth areas ...DI in the coming years. The chipboard ...ive market, in which MDI can replace ...formaldehyde, reportedly has been a ...ical outlet in Europe during the ..., and is "just beginning to catch on ...," says one producer.

...ther comments that this market, ...p "in the embryo stages," could become ...million-pound-per-year North American ...tial for MDI in the forseeable future. ...Exxon and Mobay Chemical Corporation ...ty are looking at it with interest, al... it is said that "there are a lot of problems to be ironed out," including a need for ... harvestable timber and concern over ...sed plywood expenses.

RIM MARKET

...structural RIM market, a promising ...otive application, has not fared as well ...s had hoped earlier this year. General ... of sales of its "Fiero" line of cars are ...to have leveled off during the year, and ...ompany has reportedly delayed its in...ed introduction of some comparable ...s until the beginning of the next ...r.

...PHENOL-A — Shell Chemical Company is increasing its selling prices by ... per pound, effective January 1 for non-...ract customers and February 1 for con...customers.

...was reported previously that Aristech ...icals Corporation and Dow Chemical ...tend to raise selling prices by 2c. per ... January 1.

...TX — A trader described the market last ... as "relatively quiet," as most activity ... said to involve "the logistics of getting ...oil moved before the end of the year." ...Spot benzene quote of $1.15 was given, ...ating a continuation of the upward ...spiral. Most producers have scheduled ...contract pricing to increase to $1.10 on ... from a mid-month level of 98c. per ... Standard Oil will announce its January price this week.

...Toluene firmed as well last week, and ...quoted at 78c. per gallon. Xylene pricing ...seen as holding steady at approximately ... per gallon.

...explosion and fire at Petrofina Canada Ltd.'s refinery near Montreal occurred around mid-month. The company, which produces BTX at the site, says it hopes to resume production at the first of the year.

CRESOLS — PMC Specialties Group, Inc. says it is increasing para-cresol pricing by 5c. per pound, effective January 1.

The price in bulk quantities rises to $1.05; in drums, truckload quantities, minimum 24,000 pounds, the price increases to $1.10 per pound; for less-than-truckload drum shipments, the price moves to $1.15 per pound.

Bulk and truckload shipments are priced f.o.b. Chicago plant with minimum freight prepaid and allowed to US destinations East of the Rocky Mountains. For destinations West, the price is 5c. per pound higher. Less-than-truckload shipments are priced f.o.b. Chicago, freight collect. Terms are net thirty days.

An industry source comments that PMC's move is "a continuation of a general trend" toward higher pricing in recent months. The two other US suppliers, Merichem Company and Biddle Sawyer Corporation, which distributes for Synthetic Chemicals Limited of the UK, raised prices in October.

This source says there has been some tightness in the market lately, attributable at least in part to one company's production difficulties in November.

PHTHALIC ANHYDRIDE — Heavy export business, predominantly to the Far East, has been recorded since August. For the three-month period ending October 31, 18 million pounds of material were exported, compared with 3.7 million pounds for the previous seven months of the year, and 13 million pounds for all of 1985.

Should the recent export pattern continue, and producers expect it to last into the first

PRICES TRENDLINES

WEEK ENDING DEC. 26, 1986

CHANGES/UP

None

CHANGES/DOWN

None

AROMATICS INDEX

The Aromatic Organics index reflects the prices of 14 representative materials in this sector and the quantity of each produced in 1985.

Dec. 26, 1986	167.84
Dec. 19, 1988	187.84
Nov. 28, 1986	187.84
Dec. 27, 1985	187.84

Chemical Prices Start on Page 24

AROMATIC ORGANIC IMPORTS: OCTOBER

CENSUS BUREAU REPORTS ON THE TOP 24 AROMATICS.

		October Quantity	October $ Value	September Quantity	September $ Value
...phenols	lb.	166,436	342,610	86,793	264,827
...line	lb.	---	---	---	---
...zene	gal.	7,776,014	6,693,364	8,616,476	4,044,629
...zoic acid	lb.	165,000	42,582	336,247	103,865
...tar*	lb.	13,746,638	1,541,626	13,171,746	956,601
...osote oil	gal.	16,433	16,672	36,677	16,906
...mene	lb.	34,776,471	3,776,100	6,234,126	1,158,566
...ylbenzene	lb.	1,321	2,441	---	---
...ohexanone	lb.	150,221	67,864	2,314,898	673,448
...alic acid	lb.	76,364	26,636	164,730	60,422
...eic anhydride	lb.	697,447	258,430	---	---
...amine	lb.	1,370,110	533,061	1,440,668	568,650
...hthalene, solid, under 76°C	lb.	---	---	---	---
...hthol AS & derivatives	lb.	296,778	227,672	657,528	516,872
...enol	lb.	80,348	77,860	3,326,957	603,714
...thalic anhydride	lb.	1,330,166	750,854	778,619	157,776
...idines	lb.	77,601	73,666	1,625,360	1,936,285
...rene monomer	lb.	44,768,627	6,728,924	27,205,444	3,122,772
...uene	gal.	6,400,683	6,026,129	9,221,627	8,284,463
...ldine 1	lb.	175,756	285,025	470,464	654,110
...lene	gal.	4,970,542	6,554,668	6,314,310	4,648,690
...ylene	gal.	2,072,643	2,054,763	2,457,328	2,116,736
...ylene	gal.	840,666	1,026,770	6,053,804	5,362,442
...enols	lb.	35,336	11,400	65,661	27,230

*Includes pitch of coaltar, blast furnace, tar oil, etc.

AROMATICS

quarter of 1987, export demand in 1986 would be two and one-half times greater than 1985, and would account for a 2.1 percent increase in overall production for the year.

Reflecting relatively steady domestic business, total production through the first nine months of the year was 3 percent ahead of last year's pace, and producera say they expect the growth rate for the year will range between 3 and 4 percent.

Producers say that demand could tall off next year and return to 1985 levels. It is believed that new tax laws may curtail demand in the commercial real estate, automobile, and leisure vehicle markets. In addition, it is noted that automobile makers made wide use of sales incentives in 1986 that may not be repeated next year.

Nonetheless, market pricing has bean firm recently, producers say, and the eliminating of competitive allowances has been taking place. "This has been the calmest annual [...]tract negotiation (period) in years," [...]ments one producer, since "suppliers are sold out." Market tightness is said to be [...]lated to widespread downtime in the industry during the second half of the year.

Producers say a major concern of their [...] rising feedstock orthoxylene costs. In October, when phthalic pricing was last increased, orthoxylene was priced between 12¾c. and 13c. per pound. Pricing in December has been reported at 13¾c. per pound, and orthoxylene producers are said to be aiming for a ½c. to 1c. per pound increase for January.

TOLUENEDIAMINE — Air Products Chemicals, Inc. will increase the list price of its m-toluenediamine 3c. per pound, effective January 1, 1987, the company announced late last week. The new list prica for bulk purchases will be 70 cents per pound, f.o.b. Pasodena, Texas; the new list price for truckload drum orders will be 79c. per pound, f.o.b. Houston, Texas.

The price increase is the first for m-toluenediamine since July 1984.

[...]LIPHATIC ORGANICS

[...]EG Price Hike Slated [...]y Most Major Producers

[...]creasingly tight availability of di[...]lene glycol has led major producers [...]ck industry-wide price increases [...]nced this month. Most if not all of [...]ale suppliers in the market have [...]nced price hikes due to take effect [...]uary 1, 1987.

[...], Celanese and Shell have all informed [...]stomers that as of Jan. 1, diethylene [...] prices will be raised 2c. per pound. [...] Carbide also announced a 2c. per [...]crease effective Jan. 1 for contract [...] and Dec. 1 for buyers in the spot [...]. Other major producers, including [...]ld to be supporting the industry-[...].

[...] primary reason given for the price [...] the tight supply situation facing the [...]. Although the market for co-product [...] glycol is also snug, that of di[...]glycol is tighter yet.

[...] for the tightness are unclear, [...] cite various possibilities for the [...] scarcity. "With ethylene glycol [...] rates as high as they are, there [...]mple supply of diethylene glycol," [...]e further points out that one of the [...], triethylene glycol, is seeing [...], due to relatively slow gas pro[...]. "You would think that this would [...]age in diethylene glycol availabil[...].

[...]END USE STRENGTH

[...] uses, though, are enjoying a good [...] end-product that is seeing a strong [...] antifreeze. "This season started [...] has caught up to previous years," [...]ustry source. Anti-freeze demand [...] like gangbusters in November," [...]ther, who notes that whether or not [...] resurgence of fill-in orders for Jan[...] depends on the severity of the weather [...]. The strength of demand this sea[...] drained the (ethylene glycol) system," [...] other source, indicating part of the [...] of the snug supply of both ethylene [...] and diethylene glycol.

[...]saturated polyester resin market is [...]ing well this year, accounting for [...] of the diethylene glycol disappearance. [...] strong demand areas this year include [...] building, spurred by a strong build[...] industry.

[...] deteriorating prices over the past [...] years have led some producers to [...] production. Although it is an en[...] of ethylene glycol, increasing the water ratio in the production process cuts down on diethylene glycol output. This involves the additional expense of later separating out the water from the glycol mixture, but lower energy costs have mode this more acceptable over the past two yeors.

Current market pricing is in the mid-teens, sources say, creating a situation in which it is more profitable to export the material than to sell it domestically, they add.

PRICES TRENDLINES

WEEK ENDING DEC. 26, 1986

CHANGES/UP

None

CHANGES/DOWN

None

ALIPHATICS INDEX

The Aliphatic Organics Index raflects tha prices of 20 represantative materials in this sactor and tha quantity of aach produced in 1985.

Dec. 26, 1986	222.80
Dec. 18, 1986	222.80
Nov. 28, 1986	222.80
Dec. 27, 1985	222.80

Chemical Prices Start on Page 26

HEXADECENYLSUCCINIC ANHYDRIDE — The Humphrey Chemical Company has announced that it is raising the transaction price on its hexadecenylsuccinic anhydride by 11c. per kilogram, effective for shipments made on Jan. 15. The price hike applies to the company's synthetic paper size grade material. Humphrey indicates increased production costs as the motivator for the increase. Another supplier is said to be planning a price hike as well, citing an increase in pricing of hexadecene, a raw material for the anhydride.

METHYL ETHYL KETONE — Shell Chemical Company has announced a price decrease of 1c. per pound on methyl ethyl ketone. The price move, effective Dec. 18, will bring the new per-pound delivered prices, by zone, as follows: Nework, 23c.; Northwest, 24c.; Southwest, 26c.; Mid-Continent, 25c.; Southwest, 23½c.; West, 25½c.; and Northwest, 28½c.

The price decrease is described by Shell as

[...]PHATIC ORGANIC EXPORTS: OCTOBER

[...]REAU OF CENSUS FIGURES IN POUNDS ON THE KEY ALIPHATICS

		OCTOBER QUANTITY	OCTOBER $ VALUE	SEPTEMBER QUANTITY	SEPTEMBER $ VALUE
[...]ic Acid	lbs.	1,533,403	412,858	12,564,665	1,286,077
[...]	lbs.	1,747,211	528,285	1,992,429	568,861
[...]nitrile	lbs.	81,827,163	18,218,245	78,798,461	17,952,481
[...]ic Acid	lbs.	5,048,972	2,341,717	8,219,396	3,538,881
[...]diene	lbs.	26,887,626	3,327,264	13,060,838	2,650,179
[...]nol	lbs.	6,102,903	1,305,643	11,125,548	9,234,156
[...] Acetate	lbs.	4,232,026	1,216,181	4,759,881	1,174,910
[...]lactam	lbs.	1,053,396	514,334	3,390,138	9,066,646
[...]ted Hydrocarbons	lbs.	4,319,858	948,468	18,864,416	2,642,533
[...]olamines	lbs.	16,222,051	4,270,018	18,904,732	4,883,247
[...] Acrylate	lbs.	6,806,720	2,260,641	5,662,048	1,268,544
[...] Alcohol	gals.	704,366	1,137,822	66,223	166,018
[...] Dichloride	lbs.	18,701,719	1,892,288	2,285,202	205,453
[...] Glycol	lbs.	47,387,853	7,471,827	45,200,357	6,992,953
[...]aldehyde	lbs.	881,428	140,631	1,248,065	226,495
[...] (Crude)	lbs.	272,806	108,681	502,671	622,860
[...] (Refined)	lbs.	801,952	—	1,134,269	1,156,586
[...]	lbs.	4,853,310	2,465,820	4,244,303	2,520,610
[...]nol	gals.	483,219	286,947	3,475,063	929,148
[...] Ethyl Ketone	lbs.	3,866,806	1,663,938	6,439,975	1,689,364
[...] Methacrylate	lbs.	6,780,764	2,634,302	6,421,961	2,171,639
[...] Chloride	lbs.	8,268,260	1,392,227	10,372,053	1,724,765
[...]chloroethylene	lbs.	4,154,227	546,468	1,810,663	240,386
[...]ethylene Glycol	lbs.	616,106	482,198	777,051	584,369
[...]propylene Glycol	lbs.	20,250,219	9,875,776	13,376,009	7,333,864
[...] Alcohol	lbs.	6,165,666	1,389,024	20,672,921	3,636,697
[...] Glycol	lbs.	1,796,814	3,226,807	6,156,066	1,676,109
[...] Oxide	lbs.	3,063,422	1,653,702	22,943,487	9,000,065
[...]chloroethylene	lbs.	3,919,411	837,946	[illegible]	1,367,264
[...] Acetate	lbs.	39,466,823	7,695,769	67,182,666	13,269,263
[...] Chloride	lbs.	126,672,259	19,036,036	66,182,287	14,911,43[illegible]

ALIPHATICS

an attempt to keep posted prices in line with effective market prices; additionally, the company saya it is seeking to establish realistic zone-delivered pricea.

This move la in contrast to a prics increase of 1c. per pound announced esrlier this month by Celanese. Also, Exxon announced that effective Jan. 1 it would remove the 1c. per pound competitive allowance that it had placerl on methyl ethyl ketone.

Market sources complain of tight supplies brought about by operating problems at a number of plonta in both the US snd Europe. Also, atrong aupply relative to demand in recent years softened pricing. The price movea by Celoncse and Exxon sre said to be attempts to correct pricing in light of currently snug suppilea.

Advanced Materials

Continued from Page 5

while other firms will become more receptive to hybrid fabrica and three-dimensional woven fabrics in such shapea as I-beams and cylinders.

"Advanced materials will be pervasive throughout the whole industry changing the way people do things," Mr. Commins predicts.

At the same time, according to the report, new production techniques will revolutionize the advanced composite industry.

High-performance, thermoplsstic-resin systems, for example, promise to cut fabrication time and waste, while improving part-to-part consistency and performance. The same goes for improved automsted equipment, such as filament winders and pultruders. New, low-cost raw materials, and advanced agents to bond fibers and resins, will create stronger and more dursble composites.

The advanced composites group, according to the report, shows the following characteristics:

- 56 percent are privately-held. The remainder are subsidiaries or divisions of other companies.
- Sales of these 50 US manufacturers accounted for 55 percent of the entire US market for advonced composites. These firms range in size of sales (based on 1985 figures) from 2 million to $232 million.
- Most firms projected an average 23 percent increase in sales for 1986 over 1985.
- Sales of the 50 US manufacturers were mostly to the aircrait and aerospace industry. Other industries include sutomotive, electrical/electronic, militsry, msrine, medical and recreational.
- International sales accounted for an average 9 percent of the total revenues of the 50 manufacturers. Thirteen firms hsd no international sales.

Over the past year at lesat eight compositea firms were absorbed by isrger companies. Among the buyers were such big league playcra as E.I. du Pont de Nemours & Co., B.F. Goodrich Company, BASF Corporation and Amoco Corporation.

"As this market grows, it might well be survival of the fittest," Mr. Commins says.

DRUGS & FINE CHEMICALS

Lanolin and Wool Grease Seen as Finally Levelling Off

...ter a year and a half, which saw ...rises in the prices for lanolin, the ... appears to have levelled off. ... product is more available," says ... source, "right now, we are looking ... stability."

...all, the market is termed "normal" by ... sources, with no new applications ... opening up in the immediate future ... is adequate," says one producer, "we ... problems in meeting the demands of ... customers." For 1987, there is general ... that the year will bring only ... adjustments.

... prices have been stable during the ... months. Current list prices are ... $1.13 per pound for the technical ... $1.15 per pound for the pharmaceutical grade, and $1.18 to $1.25 per pound for the ... grade. There may be slight variations depending on the quantities ordered ... producer offers a pesticide-free, high... odor-free product of "good color" for ... dollars per pound. According to one ... there is a growing interest in ... lanolin.

... source says that there is "a craze back ... products," and predicts a "rebirth ... in skin care products.

DROP FOR WOOL GREASE

... present, yearly consumption of lanolin ... estimated between 10 and 15 million ... per year; some sources put the figure ... million pounds.

Consumption of lanolin derivatives is ... estimated at 2 to 3 million pounds ... pricing of the derivatives is closely ... the pricing of lanolin.

... present the prices of wool grease, ... material, are quoted at around 50 to ... per pound. Several sources mention ... drop in the prices for wool grease, ... that prices may level off in the 45 ... range during the coming year. A year ... ago, wool grease was priced at 28 ... per pound.

... import figures for wool grease ... total of over 5 million pounds of wool ... imported into the US. The figure for ... million and for 1984 it was 5 million ... From this total, to date, Australia ... million pounds of wool grease into ... 1986, down from 3 million pounds in ... 1984, Australia exported 2 million ... to the US.

CHOLINE CHLORIDE — Syntex Inc. will ... prices for choline chloride, effective ... 1, 1987.

... prices will be as follows: 50 percent ... choline is 36c. per pound, bulk, in ... cars and hopper trucks. Bagged ... 37c. per pound for 40,000 pounds, ... 10,000 pounds, 30c. for 5,080 pounds, 40c. for 2,000 pounds and quantities less than that also 40c. f.o.b.

Seventy percent aqueous choline chloride is 30c. per pound, bulk, for 40,000 pounds; drummed prices are 42c. per pound for 10,000 pounds, 43c. per pound for 5,000 pounds, and 44c. per pound for 2,000 pounds. Less than 2,000 pounds cost 44c. per pound, f.o.b.

For both grades the company indicates f.o.b. freight allowed on 2,000 pounds or more. Less than 2,000 pounds, f.o.b. plant or warehouse. For shipments West of the continental divide 4c. per pound is added.

Syntex is following the lead of Nutrius Inc. and Chinook Chemicals, the Canadian producer of the product, who announced similar price hikes earlier this month (CMR, 12/8/86, p. 22).

Choline chloride is termed as "moving well" by industry sources. The market is receiving considerable support as result of the expansion in the poultry industry.

PRICES TRENDLINES

WEEK ENDING DEC. 26, 1986

CHANGES/UP

None

CHANGES/DOWN

None

DRUGS INDEX

The Drugs & Fine Chemicals index reflects the prices of 10 representative materials in this sector and the quantity of each produced in 1985.

Dec. 26, 1986	211.18
Dec. 19, 1986	211.18
Nov. 28, 1906	211.16
Doc. 27, 1905	211.16

Chemical Prices Start on Page 24

BOTANICALS

KARAYA GUM — Buyers for this gum are said to be waiting while efforts by the Indian government to establish floor prices for this product are under way. "The market is very quiet" says one buyer of the crude product, "with virtually no recent offerings."

According to industry sources, NAFED, the National Agricultural Cooperative Marketing Federation of India, Ltd., aims to raise present karaya gum prices by about 18 percent. At present, prices quoted to importers of the crude are at $130 for 50 kilos for the number one product and $120 for 50 kilos for the number two variety. Prices for the fin-

DRUG & FINE CHEMICAL EXPORTS: OCTOBER

BUREAU OF CENSUS FIGURES ON THE KEY DRUGS.

		October Quantity	October $ Value	September Quantity	September $ Value
... and salts, bulk	gms.	48,180	2,308,818	5,641	747,886
[illegible]	gms.	68,250	8,784,246	68,790	8,008,974
[illegible]	blu.	89,469	2,584,027	7,374,168	1,219,834
...illins, G Salts, Bulk	blu.	8,268,200	703,831	148,243	2,865,021
Tetracycline	gms.	1,898	2,827,434	1,238	1,458,411
... and deriv.	lbs.	478,300	702,117	274,006	388,182
... acid	lbs.	13,804	58,698	38,300	138,805
... alkaloids and deriv.	lbs.	1,672,262	1,142,328	566,935	927,658
[illegible]	lbs.	2,179	323,549	592	89,328
...ones:					
Corticosteroids, nspf	lbs.	3,924	8,758,802	3,112	8,466,273
...steroid hormones	lbs.	6,328	1,948,553	18,862	1,209,298
... and esters salts	lbs.	3,419	4,172,460	3,342	4,131,280
Steroid hormones and synthetic	lbs.	113,208	2,766,591	22,382	2,116,885
...sides, bulk	lbs.	21,940	464,779	102,812	1,424,252
Vitamins:					
Ascorbic Acid	lbs.	203,646	1,042,898	194,684	556,493
Vitamin A and Pro-vitamin A, bulk	lbs.	33,499	29,330	150,261	207,856
Vitamin B, (thiamine)	lbs.	9,282	92,052	5,954	82,164
Vitamin B_{12}	lbs.	2,770	33,402	1,054	25,584
Vitamin E	lbs.	08,354	1,014,058	[illegible]	1,127,744
D and Dl pantothenic acid	lbs.	2,546	22,452	[illegible]	22,462
Niacin and niacinamide	lbs.	32,312	184,181	[illegible]	149,640
Vitamins, nspf	lbs.	205,928	852,094	[illegible]	907,28

DRUGS & FINE CHEMS

ished powdered gum range between $2.50 and $1.65 per pound, depending on quality.

According to one source, meetings are being held for the purpose of establishing effective controls at the auctions where the raw gum is offered by individual collectors. As a result, the situation is described as "very confusing" with no offerings being made.

Bureau of Census figures reflect the market situation, showing a decline in the amount of gum that has come in to the US this year. During the first ten months of 1986 only 2,394,903 pounds came here, in contrast to 3,354,699 for the same time in 1985.

LOCUST BEAN GUM — Prices for this gum have levelled off during the last few months. They have dropped from their previous highs in 1985, when locust bean gum demanded between $6.00 and $6.75 per pound, more than double the price of $2.50 in 1984, but are still above normal levels.

Presently, prices for locust bean gum are quoted at $4.75 to $5 per pound, depending on quality. Industry sources expect a slight drop in price of about 5 percent for the coming year. At present there are isolated quotes for bean gum at $4.50 and even below $4. But as one source explains, this might be for a lower-quality product, adding that a speckless, high-quality gum is required by most end users.

Supply is described as "readily available" by one source, adding that "there is not much buying going on right now." This drop in demand is blamed on the combination of higher prices for the product and a weakened dollar.

The new crop is in and is termed good by one source. End users are said to be preparing to place their orders for the prime season coming up in March through June, when ice cream producers are getting ready for the Summer.

Imports are up for the first 10 months of 1986. Through October 4,247,606 pounds came into the US, as compared to 3,645,677 pounds through October in 1985.

Pesticide Restrictions

Continued from Paga 4

...ne. It was caocelled for most home and agricultural uses in 1975 after EPA determined it caused cancer in laboratory animals.

In 1978, tha agency reached a settlement agreement under which the remaining uses of the chemical, except for termite control, were phased out over a three-year period. The only remaining legal use of chlordane is for termite control by way of underground application.

DDT was formerly used throughout the US to control insects on crops and around the home. It was banned in 1972 because of its persistence and consequent magnification in the food chain and because of its adverse effects on the environment, particularly the reproductive effects on fish and fish-eating birds.

Aldrin and dieldrin are also insecticides that were widely used through the agricultural industry before they were banned by EPA in 1975 on the basis of their risk to public health and the environment. Both products are persistent in the environment and cause cancer in animals, according to the agency.

Methylene Chloride

Continued from Page 7

...for an emergency standard, "We have noted action by some employers to substitute chemicals and reduce exposures, but there will never be full protection until we get a standard that reduces exposures to the lowest feasible level."

In denying the petition, OSHA said that "normal" rulemaking would begin on methylene chloride. The agency noted that more than one million workers are exposed to the liquid chemical, widely used as a solvent for industrial processes, food preparation and agriculture.

OSHA says there is "sufficient evidence" that methylene chloride can cause cancer in animal species, but it maintains that human studies are inconclusive on whether exposure to the chemical is harmful.

The existing OSHA exposure limit is 500 parts methylene chloride per million parts of air, a level the union feels is too high. UAW says it should be reduced to the lowest feasible level.

Last May, the American Conference of Government Industrial Hygienists changed its recommended threshold limit from 100 ppm to 50 ppm.

'Bendectin' Award

Continued from Page 5

and in the other the jury was unable to reach a verdict.

In one case in 1983 a jury found in favor of the plaintiff. However, the trial judge overruled the jury's verdict on the basis the evidence presented was not sufficient to prove "Bendectin" was the cause of the child's birth defects. In 1986, a court of appeals overturned the trial judge's ruling and restored the original jury verdict. Merrell Dow has filed a petition for a rehearing of the case by the Court of Appeals which is currently pending.

Two court decisions have been rendered in cases outside the United States. Both were awarded in favor of Merrell Dow's West Germany subsidiary in January, 1986.

Chemical Finance

C&K Sells Kem Operations

Crompton & Knowles Corporation has sold off most of its Kem cleaning, maintenance and water-treatment chemical operations in two separate transactions. As a result of the divestment and negotiations to sell the remaining portion of the Kem business, the company says it will take a charge of $7.7 million against 1986 earnings.

The charge will take account of an accumulated foreign currency translation adjustment of $7.1 million related to Kem's international operations. The remaining $600,000 represents the expected charge for the disposition of all the Kem operations.

Kem accounted for about $27 million or 14 percent of the company's $186 million sales in the first nine months of this year. Although the foreign portion of the business has been profitable, the US business has operated at a loss for several years, Crompton & Knowles says.

Vincent A. Calarco, chairman, president and chief executive officer of the company, said in making the announcement that despite the $7.7 million one-time charge, "we expect to report 1986 as a profitable year" based on the performance of continuing operations.

According to Mr. Calarco, the divestment was made because "Kem didn't fit our corporate strategy of operating specialty businesses which permit long-term differentiation of products and services to the customer."

For the latest nine months, C&K reported record earnings of $8.4 million, or $1.[illegible] per share, based on sales of $168 million. For the same period of 1985, the company's sales were $174 million, with earnings of $5.3 million, or $1.52 per share.

Phelps Dodge Completes Acquisition

Phelps Dodge Corporation has completed its acquisition of Columbian Chemicals Company for approximately $250 million. Columbian Chemicals, headquartered in Atlanta, Ga., operates five carbon black plants and two iron oxide plants in the US and, through subsidiaries, six carbon black plants in the UK, Canada, Germany, Italy and the Philippines. For the nine-month period ending September 30, 1986, the company's net income was $19.8 million, on sales of $230 million.

For Phelps Dodge, which lays claim to being the nation's largest copper producer, with earnings of $50.8 million and sales of $839.7 million during the first nine months of '86, the acquisition reflects its announced intent to diversify into one or more additional businesses.

The purchase price was made up of $60 million of Phelps Dodge internally generated funds, $180 million of bank debt financing arranged by Morgan Guaranty Trust Company and about $10 million of assumed debt, net of cash on hand, the company says.

Columbian Chemicals will continue to be operated by its current management, headed by Alan Burkart, president and chief operating officer. Ladislaus von Hoffmann, chairman of the board, and Kurt Eckrich, a director of Columbian Chemicals, have resigned their positions, but will remain with the company as consultants, Phelps Dodge says.

Sterling Drug Acquires Three

Two European over-the-counter pharmaceutical companies with combined sales of close to $30 million have been acquired by Sterling Drug Inc. and, in a separate transaction, Sterling has acquired Woodroof Laboratories, Inc., a Santa Ana, Calif.-based producer and marketer of a patented synthetic wound-care product.

John M. Pietruski, Sterling chairman and chief executive officer, says the European acquisitions — Laboratories Valda, a family-owned company in Paris, with manufacturing facilities in France and Italy, and Laboratoire du Docteur Furt, based in Bordeaux, "are important steps in Sterling's stated goal to strengthen the company's presence in these two key markets."

According to Sterling, Valda lozenges are sold in France and Italy and have strong export sales and the company also makes and markets medicated gums. Furt produces and markets products in the laxative category and its product line also includes fiber products and diet aids.

Woodroof Laboratories makes and markets "Biobrane" biosynthetic burn wound dressing, which eliminates the need for painful dressing changes during the healing process since it permits viewing of the wound and penetration of topical antibacterials. The product will be marketed by Winthrop-Breon Laboratories, Sterling's domestic prescription medicines marketing division. Terms of the cash purchase were not disclosed.

Koppers Purchases Operation of ICI Americas

Koppers Company has purchased the "Atlac" specialty thermoset resins business of ICI Americas Inc. for an undisclosed price, corrosion and flame-retardant resins, vinyl esters, binders, toners and ITP molding resins. The sale includes commercial knowledge, customer lists, trademarks, manufacturing know-how and patents.

Dr. Alonzo Wm. Lawrence, sector vice-president, notes that the resins will expand Koppers' existing "Dion" value-added resins business.

Expansion of the specialty polyester resin line is part of a Koppers strategy to focus operations on its strongest businesses — chemicals and construction materials and services. During 1986, the company completed sales of most of the ten businesses the company said it would divest and formed a $200 joint venture in the construction materials and services sector.

Chemical Financial Briefs

Amoco Corporation has approved a 1987 capital and exploration budget of $[illegible] billion, essentially unchanged from $3.28 billion this year. The company knocked down its '86 spending target to about $3.8 billion from the original $5 billion due to the steep drop in oil and gas prices.

Unilever United States, Inc., has received early termination of the waiting period under the Hart-Scott-Rodino act in connection with its merger agreement with Chesebrough-Ponds, Inc. and expects to complete the merger this Wednesday (December 31).

Henley Group Incorporated, La Jolla, Calif., has executed a previously announced senior revolving credit agreement with 21 banks providing up to $3 billion for investments in or acquisitions of businesses or companies, although no particular investment or acquisition has been identified.

Squibb Corporation, Princeton, N.J., has declared a special dividend of one share of common stock of Westmark International Incorporated the holding company for Squibb's high-technology medical equipment business for each five shares of Squibb common stock held by shareholders on December 31.

CooperVision, Inc. has reached an agreement in principle to sell its ophthalmic pharmaceutical products business to Johnson & Johnson for approximately $260 million in cash before the end of the year.

HEAVY & AG CHEMICALS

Ferric Chloride Producers Face a Mostly Soft Market

The ferric chloride industry is in a period of consolidation in some of its markets and growing in others, but overall, producers face significant overcapacity.

Domestic production this year is projected to register 188,000 tons, virtually unchanged from last year, while industry capacity totals 300,000 tons.

Pricing in the industry is soft, with list prices quoted at $175 per ton on the East Coast and $230 per ton in the West and Midwest. Sources say Midwest prices are being discounted.

Seventy-five percent of domestic output is used as a flocculant in the treatment of sewage. US demand for the sewage grade material is seen to be generally flat, with earlier strength being lost to the gains of polyelectrolytes and water soluble polymers. But this is not the situation in the West, especially in California.

With its ability to bind sulfur in an insoluble complex, ferric chloride is extremely useful to California's sewage treatment facilities, many of which are situated in populous areas and from which the emission of hydrogen sulfide is a serious problem.

Moreover, some of these facilities burn their sludge in digesters, and the addition of ferric chloride to the sludge helps them meet California's stringent environmental regulations by keeping the release of sulfur dioxide to a minimum.

With Western demand for ferric chloride strong — Los Angeles, for example, is seeking bids for an additional 17,000 tons per year — producers there remain bullish. One of the largest among them, Imperial West, doubled capacity early in 1986.

MARKET TO DECLINE

The Northeastern and Midwestern markets for sewage grade ferric, however, are expected to decline at a rate of 3 percent per year. Producers in these regions that are operating at full capacity appear to be using some of their output captively or are supplying steel producers. KA Steel Chemicals has built a new plant in Dravosburg, Pa., on the property of, and in order to supply, USX, which is in the midst of a strike. Producers that make primarily sewage grade material are said to be operating at significantly less than full capacity.

Mitigating the slump in US sewage grade is the strength that ferric chloride has demonstrated in potable water treatment, representing 18 percent of its total use. Demand for ferric chloride in water treatment plants is expected to grow at 5 percent per year through the rest of the decade.

The plants use ferric to clarify and flocculate water, but it has gained additional favor for its ability to maintain proper pH balance.

Moreover, ferric chloride may gain a new advantage over its main competitor in water treatment, aluminum sulfate, if the EPA should issue guidelines for residual aluminum. No such regulations are presently under consideration, but a ferric industry observer suggests they may be in a few years.

One producer that is entering the Canadian market and will be promoting ferric chloride for water as well as sewage treatment is C-I-L, which is building a facility in East Montreal with a capacity of 40,000 metric tons. The plant is scheduled to be completed in June of 1987 and it is being built primarily to supply the needs of Montreal and environs, but a spokesman says the company hopes to market ferric chloride throughout Quebec and penetrate the Canadian pulp and paper mill market. Any possibility of entering US markets, were it to come, would be years away, the company says.

An industry source points out that, "ten years ago, ferric chloride sold itself, but it has to be marketed aggressively in the present-day market."

PRICES TRENDLINES

WEEK ENDING DEC. 26, 1986

CHANGES/UP
None

CHANGES/DOWN
None

HEAVY & AG INDEX

The Heavy & Ag Chemicals Index reflects the prices of 18 representative materials in this sector and the quantity of each produced in 1985.

Dec. 26, 1986	113.69
Dec. 19, 1986	113.69
Nov. 26, 1986	113.69
Dec. 27, 1985	113.69

Chemical Prices Start on Page 24

BASES & SALTS

CAUSTIC SODA — Holtrachem, Inc., a major distributor of caustic soda, has announced an increase in the price of its caustic soda solution, effective immediately and as contracts permit, on a case-by-case basis.

The company notes that the unfavorable balance of caustic soda and chlorine, which resulted in the only mixed success of the industry's October 1 increase, no longer prevails.

The company adds that chloralkali operating rates are considerably higher than a year ago, due to rationalization, but that there is no likelihood of a supply shortage in 1987. Holtrachem does expect a higher price for the ECU in 1987, but does not know by how much or whether it will tend to affect chlorine or caustic soda.

SODIUM CHLORIDE — International Salt Company has announced price increases on its evaporated and rock salt products, effective with orders and shipments on and after January 28, 1987.

According to the company, the increases

INORGANIC CHEMICAL OUTPUT: SEPTEMBER

SELECTED FIGURES IN SHORT TONS FROM THE CENSUS BUREAU.

	SEPT. '86	AUG. '86	SEPT. '85
Aluminum sulfate, commercial	110,403	123,521	99,001
Calcium carbide, commercial	18,202	16,604	18,376
Calcium phosphate, dibasic anhyd.	49,835	44,045	41,713
Caustic soda, dry	18,841	18,071	23,296
Caustic soda, liquid	947,693	932,816	868,164
Chlorine, gas	877,271	865,880	840,891
Chlorine, liquid	893,178	899,999	838,358
Hydrochloric acid	233,571	238,198	240,366
Hydrofluoric acid	15,443	21,699	19,466
Hydrogen peroxide	13,304	13,308	12,961
Phosphorus, elemental	28,244	28,598	28,228
Phosphorus oxychloride	2,741	2,456	1,889
Phosphorus pentasulfide	8,471	8,262	8,514
Phosphorus trichloride	9,120	9,311	8,215
Potassium hydroxide, liquid	—	—	16,982
Potassium pyrophosphate, anhyd.	1,848	1,899	1,834
Sodium chlorate	28,498	26,903	24,495
Sodium metal	4,990	4,867	5,236
Sodium sulfate, anhyd	87,474	80,727	88,806

HEAVY CHEMICALS

average about 3 percent and will meon an advance of approximately 12c. per 60 pound bag and $2 per bulk ton. In addition, dlacounts from published f.o.b. plant prices will be canceiled, the company says.

Continuing pressures on margins due to higher costs for labor, packaging materials and additives make the increase necessary, according to fnternational Salt.

INDUSTRIAL ACIDS

SULFURIC ACID — Stauffer Chemical Company is raising its off-schedule pricing lor sulfuric acid shipped from its Portlond, Ore., Tacoma, Waah. and Dominguez ond Martinez, Calif., facilities by $5.35 per ton, 100 percent basis, not to exceed current schedule pricing. the increase is effective immediately, or as allowed by contract.

On December 1, Stauffer raised the price of its Hammond, Ind., aulfuric by the same amount, adding their name to the growing number of producers that bave recently raised prices for both the recovered and elemental product.

Their latest hike, however, falls in line with General Chemical's recent increase. Whether this represents the atart of a Far-western trend for 1987, and wbether auch a trend would affect the price of recovered as well as elemental sulfuric, remains to be seen.

METALS AND MINERALS

COBALT — Zaire and Zambia hnve reportedly agreed to establish a uniform price for cobalt at $7.00 per pound. The November 20 agreement was intended to atabilize the cobalt market and the price has held to date, though its future is open to question.

One source feels thot demand for cobalt is strong enough to keep its price at or near $7.00, but he adds that demand will probably have to rise to sustain the price through all of 1987. According to the Bureau of Mines, demsnd was 19 percent higher in September than in August, but cobalt's price at the time was $6.00-$6.40.

The auccess of the $7.00 figure, however, will depend on cooperation between Zambia and Zaire as well as on demand. In the Spring of 1984, the two countriea, whose combined production of cobalt accounts for 60 percent of the world's total, established a price of $11.70; but the price collapsed when Zambin reportedly undercut its partner, initiating n price war that drove the price of cobalt to its historical low.

If Zambia and Zaire succeed in honoring their latest agreement, a factor in favor of the $7.00 figure ia its reasonable level. According to industry sources, $7.00 ia higher enough to encourage production, asauming demand remains healthy, but it is not so high that a repetition of price wars is assured.

Fiber Optic Sensors

Continued from Page 7

elimination of spark hazard, smaller size and lightar weight, accuracy and range of measurement, and resistance to shock, vibration and noise.

According to the study, while theoretical research in the US has addressed virtually all potential fiber optic sensor applications and has estahlished a theoretical basis for practical applicatinns in many areas, most current practical US applications are still focusing on proximity, liquid level, temperature and medical sensing.

"In contrast," saya IRD project manager Carole Keogh, "fiber optic sensor development in the UK and Canada is somewhat more diverse. In what appears to be the consequence of market dynamics, those countries have made considerable progress in the commercial application of flow and pressure sensors and the development of remote systems."

Because of their reliance on offshore oil markets as opposed to industrial markets, more emphasis has been put on the development of pressure and flow systems because they are vital in offshore operations and for resolution of difficulties associated with fiber optics at extreme distances.

On the other hand, demand is strong in the US for proximity sensors for factory automation, for temperature and level sensors in military/aerospace markets, and for nonelectric sensors in medical markets.

As for Japan, the current emphasis is on the development of new fiber optic sensors for household and other consumer applications, as well as ongoing development of industrial fiber optic sensors to replace conventional types, IRD says.

Approximately 100 US manufacturers are involved in the fiber optic sensor market, according to the IRD report. Among the market leaders are Cardiovascular Devices, Inc., EOTec Corporation, Luxtron Corporation, Honeywell's Micro Switch Division, and Electro Fiberoptics Corporation.

Mony applications of the new fiber optic sensors involve displacing older types of sensors, but with few exceptions the traditional "low-technology" sensor manufacturers have run into technological barriers to entry when they have looked at the fiber optic sensor business. "The new sensor business is dominated by small high-tech companies, some of them started only a year or two ago," comments IRD's Keogh. The fragmented "niche" character of the maket has led to some "nice profit margins," according to the company'a study, which does not predict any sort of near-term shakeout. "But all the conditions are ripe lor a wave of mergers and acquisitions," points out Ms. Keogh.

COATINGS & PLASTICS

Du Pont Scores

Continued from Page 3

advancement in fiber technology since oylon." To dete, the company's investment in this product has totelled over $600 million.

The material, five times stronger than steel, is used mostly in composite structures in aerospace and industrial applications requiring high strength. ft is also used in rope and cable manufature, radial passenger tire and protective vests and garment applications, as well as a replacement for asbestos in gaskets and brake linings.

In 1963, the US market for "Keviar" moved from 15 million pounds to 17 million pounds. To meet tbis new demand, Du Pont increased production capacity at its Richmond Virginia plant from 15 million to 49 million pounds, at a cost of $200 million. This capacity is expected to meet US domestic and export markets through the end of the decade.

With presence established in both US and European markets, bolb producers are now looking to the Japanese market.

In 1963, Du Pont started a joint venture with Toray Industries Inc. of Japan for the sale of "Kevlar" in Japan. The Du Pont-Toray Company currently imports polymer chips from tbe US, processing them for sale in Japan. By 1988, the company plans to have a production plant on line in Japan, with capacity "in excess of 6.6 million pounds," alter expenditures totalling $100 million.

Akzo has also been active in the growing Japanese market. Enka and Sumitomo Chemical Company hsve recently agreed to form a joint venture, Nippon Aramid Yugen Kaisha, to market Enka's "Twaron" fibers in Japan.

JAPANESE MARKET STRONG

The venture predicts sales totalling 200 metric tons in Japan oext year, and aees the market expanding tenfold by 1991. By that time, it plans to build a 2000 metric ton production plant to process polymer, which it will continue to import from Akzo.

Du Pont and Akzo are not the only producers strengthening their presence in Japan. Teijin Ltd. has been marketing an aramid fiber, "HM-50," similar to "Kevlar" but based on a different process, for the past 4 years. The company started a 1.1 million pound per year production plant in Japan last year.

Teijin also markets, "Teijiconex," a polymer line similar to Du Pont's "Nomex." Together with Technora Ltd. of Japan, Teijin has announced plans to atart marketing "Technora" a new line of aramid fibers, by the summer of 1967.

PLASTICS MATERIALS

ACRYLIC POLYMERS — Rohm and Haas Company will be raising prices for many of its acrylic acid based "Acrysol" water-soluble polymers on January 1, the firm announced last weak.

The price increasa, the first for the product line, will raise prices for selected grades of the material from one cent per pound to ten cents per pound, depending on product.

"Acrysol" polymera are used primarily in industrial water treatment, oil production, mining and detergent applications.

PHENOLIC RESINS — Schenectady chemicals will be raising prices for its lines of phenol and alkylphenol-based resins on January 15, the company announced last week.

To date, BTL Specialty Resins and Borden Chemical Company have announced phenolic resin price for January, in response to higher phenol costs.

PRICES TRENDLINES

WEEK ENDING DEC. 26, 1986

CHANGES/UP
None

CHANGES/DOWN
None

COATINGS INDEX

The Coetings & Plastics index reflects the prices of 13 representative materiale in this sector end the quantity of each produced in 1985.

Dec. 26, 1986	306.4
Dec. 18, 1986	306.4
Dec. 30, 1986	306.4
Dec. 27, 1985	308.4

Chamical Pricea Start on Page 24

MISCELLANEOUS

ACTIVATED CARBON — Despite price increases this year, producers describe market pricing as "unsettled." Discounts are "all over the place" saya one producer, giving ranges of 5 percent to 20 percent, off list prices.

Overcapacity and a surge of cheaper imported substitutes, particularly coconut carbon from the Philippines, have been keeping prices low, producers say.

The market for activated carbon is described aa mature. US demand is currently estimated to run between 190 million and 200 million pounds per year; flat to 1.5 percent annual growth is expected for the future.

Industry capacity, which had been around 400 million pounds per year for several years, was pruned considerably wben Witco Corporation left the business. Westvaco Inc., another producer is said to have reduced capacity, putting some production lines on standby. Subsequent industry restructuring isa said to have reduced the figure to betwean 300 million and 330 million pounds. Even witb this improvement, producers feel that overcapacity will continue to dominate tha market for the near future.

COATING & PIGMENT EXPORTS: OCTOBER

BUREAU OF CENSUS FIGURES ON THE KEY PAINT MATERIALS.

		OCTOBER '86 QUANTITY	OCTOBER '86 $ VALUE	SEPTEMBER '86 QUANTITY	SEPTEMBER '86 $ VALUE
Antimony Oxide	lbs.	216,152	342,059	—	—
Carbon black, including thermal	lbs.	6,690,070	4,196,639	9,166,668	5,942,066
Chromium pigments (1)	lbs.	469,674	746,443	622,526	666,036
Colors, lakes and toners (Cyclic);					
Concentrated dispersions	lbs.	161,037	696,556	258,610	964,602
Yellow	lbs.	126,293	613,044	109,030	264,867
Red	lbs.	92,664	692,580	50,716	622,064
Violet	lbs.	36,443	526,206	4,194	66,416
Blue	lbs.	466,243	1,646,214	486,091	1,956,630
NSPF	lbs.	1,048,006	4,206,202	777,838	2,797,161
Prepared paint and varnish dryers	lbs.	316,236	376,993	761,466	621,114
Prepared solvents & thinners	lbs.	1,966,422	1,662,924	2,241,663	1,663,266
Iron oxides; nat., syn.	lbs.	6,601,141	3,242,036	4,807,657	2,766,731
Lead oxides	lbs.	60,606	12,000	12,201	3,606
Phthalate esters: Dioctyl phthalate	lbs.	1,294,670	424,692	767,963	247,361
Other phthalates	lbs.	69,610,616	7,465,576	61,722,201	14,753,766
Titanium dioxide	lbs.	16,776,004	10,697,146	20,435,636	14,753,766
Zinc oxides	lbs.	240,616	190,496	73,693	46,662
Zirconium oxide	lbs.	226,310	310,369	96,626	266,058

(1) includes mixtures

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Synthetic Musk Prices Rise, Responding To Dollar, Imports

...thetic musk spot prices jumped ...week as higher shipping prices of the ...onth were passed on. Musk ketone ...he product most dramatically af... increasing from $8 per pound to ...$9 per pound. Musk xylol increased ...20 cents per pound to $2.90 per ... One source quotes xylol at $3 per ...on the spot market.

...ons cited for the price rise focus on ...weakening dollar overseas and a back... from low prices supressed by import ...petition. A domestic manufacturer em... the dollar's effect on overseas pro... "It's purely the dollar change against ...currencies. One domestic distributor of ... xylol says "low priced imports from ... have depressed the market, keeping all ... prices lower."

...clear indication of the current competi... climate is the total import figure for ...etic musks. For 1985, a total of 819,977 ...ds were imported; through October, ... 1,340,373 pounds have been brought ... the country. That such large quantities, ...ly 520,396 pounds ahead, have reached ... attests to the drive to sell material ... One source says the quantities are ...ly musk xylol, the largest volume and ... widely applied of the "musk" aroma ...icals.

...f the total synthetic musks imported ...gh October, China accounts for 50 per... the Netherlands 17 percent, Great ...ain and Switzerland for 15 percent and 12 ...cent respectively. The material from the ...erlands and Switzerland is predomi...ly musk ketone.

MUSK XYLOL CHEAPER

Musk xylol is less expensive than musk ketone because its "cheaper feedstock costs ... production methods keep it lower," says ... aroma chemicals broker. The ketone, as a ..., is compounded in more costly per... One chemist with a domestic supplier ... synthetic musks says that, though the two ... are obviously different, "compounders ... use the ketone in more expensive and the ... xylol in less expensive formulations more out ... habit than need." He adds that whether one ... qualitatively more desireable than the ... is a matter of subjective preference.

The last of the three nitro musks is musk ambrette, a product that has been the subject of controversy since being "flagged as a sensitizer," according to an aroma chemicals ... Ambrette has not increased in price because of the competition the Chinese imports face from a US producer. A spokesman for this producer says that in the last few years "ambrette has been restricted for skin contact markets, like perfumes and aftershaves."

He maintains that, despite an import drop from 150 tons in 1981 to less than 20 tons in 1984, ambrette is still a necessary and sought after material: "Volume use of the ambrette has decreased, but it is still widely used; it is not easily replaced." Alternatives, he says, are either prohibitively expensive or lower quality.

The other two groups of synthetic musks are macrocyclic and polycyclic musks. Neither group has seen any change in pricing but for different reasons. The macrocyclic musks (muscone, civetone and cyclopentadecanolide are examples) "are the most expensive," says an aroma chemicals importer. "No one can afford them." Due to their high and varied price range, from $25 to $1,500 per pound, a currency fluctuation would have to be in place for a long time before sellers would adjust prices.

The polycyclic musks are the newest market entries. Developed in the 1950's, products such as ethylene brassylate, galaxolide and tonalide have made substantial gains in the aroma chemicals market.

A market analyst predicts that the ketone and xylol price increases cannot reach much more than 10 percent of November spot levels and emphasizes that 20 to 26 percent increases are inconceivable. "Competition is simply too tight. Prices cannot go up any more."

PRICES TRENDLINES

WEEK ENDING DEC. 26, 1986

CHANGES/UP

Allspice, Honduran, 1c. per lb.
Cassia, Korintji B&C futures, 1-3c. per lb.
Cedarwood oil, Chinese, 30c. per kilo
Cinnamon, H-2, 5c. per lb.
Cinnamon leaf oil, Ceylonese, 5c. per lb.
Citronella oil, Ceylonese, 10-20c. per lb.
Eucalyptus Citronella, Chinese, 35c. per kilo
Lemon oil, Israeli, 25c. per kilo
Lemongrass oil, Guatemalan, 10c. per lb.
Ocotea Cymbarum oil, 10-50c. per kilo
Peppermint oil, Chinese 50%, 20c. per kilo
Spearmint oil, Chinese 80%, 30c. per kilo
Tarragon, domestic, 50c. per lb.

CHANGES/DOWN

Basil leaves, French fancy, 3-4c. per lb.
Caraway seed, Polish, 1c. per lb.
Clove leaf oil, Indonesian 80%, 5-20c. per kilo
Coriander seed, Rumanian, 1c. per lb.
Cumin seed, 1-3c. per lb.
Dill seed, Indian, 2c. per lb.
Fennel oil, Chinese, 35%, 50c. per kilo
Palmarosa oil, Brazilian, $1 per kilo
Patchouli oil, Indonesian, 30c. per kilo
Vetiver oil, Indonesian, 50c. per kilo

PERFUMES INDEX

The Perfumes & Flavorings index reflects the prices of 11 representative materials in this sector and the quantity of each supplied in 1985.

Dec. 26, 1986	71.00
Dec. 19, 1986	71.00
Nov. 28, 1986	71.00
Dec. 27, 1985	71.00

Chemical Prices Start on Page 24

SEED & SPICE IMPORTS: SEPTEMBER

A SELECTION OF STATISTICS FROM THE BUREAU OF CENSUS.

		SEPT.	AUG.	YTD '86	SEPT. '85
Caraway seed	lb.	782,072	676,534	6,080,763	656,063
Cassia	lb.	1,824,264	3,008,076	15,627,430	2,645,751
Celery seed	lb.	706,137	205,696	3,312,240	647,955
Cinnamon, unground	lb.	201,174	126,664	1,777,786	306,651
Cloves	lb.	76,667	165,066	1,673,450	164,910
Coriander	lb.	648,336	640,677	6,173,900	673,621
Cumin seed	lb.	641,126	160,016	5,635,780	767,642
Fennel seed	lb.	142,600	176,649	3,666,701	356,151
Ginger root	lb.	2,461,330	1,061,377	8,643,307	2,166,941
Mustard seed, whole	lb.	6,678,128	6,853,627	66,096,695	6,366,544
Nutmegs, unground	lb.	164,166	246,066	3,036,206	555,038
Origanum, whole	lb.	696,391	716,216	6,430,436	425,927
Paprika	lb.	635,661	782,384	11,654,736	650,358
Pepper, black, unground	lb.	3,171,261	6,660,371	70,295,199	3,467,469
Pepper, red, capsicum	lb.	762,099	1,080,426	12,054,442	936,047
Pepper, white, unground	lb.	516,413	818,981	4,657,650	2,136,676
Pimento, unground	lb.	66,720	64,989	1,127,147	165,212
Sage unground	lb.	262,036	466,066	2,623,549	434,612
Turmeric	lb.	155,041	346,632	3,641,145	1,100,172
Vanilla beans	lb.	93,229	61,383	1,611,490	263,056

CHEMICAL PRICES

WEEK ENDING DECEMBER 26, 1986

This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and asked prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered by copyright.

An index of weekly chemical market reports is on the back cover.

A

Abies alba, dms. .... kilo	24.00	27.00
Acetaldehyde, 99%, tanks, frt. alld. lb.	.37	-
Prices 1c. higher in West.		
Acetaminophen (see N-Acetyl-p-aminophenol)		
Acetanilide, tech, flaked, bgs, t.l., f.o.b. works .... lb.	1.29	-
Acetic acid, tech., tanks, dlvd. E ... lb.	.25	-
Acetic anhydride, tanks, dlvd. E ... lb.	.43½	-
Acetic anhydride prices 1c. higher in West.		
Acetoacetanilide, dms., t.l., dlvd. .. lb.	1.29	-
Acetoacet-o-anisidide, dms., t.l., dlvd. .... lb.	2.70	-
Acetoacet-o-chloroanilide, dms., t.l., dlvd. .... lb.	2.85	-
Acetoacet-o-toluidide, dms., t.l., dlvd. .... lb.	1.58	-
Acetoacet-m-xylidide, dms., t.l., dlvd. .... lb.	3.33	-
Acetone, tanks, dlvd. E. .... lb.	.25	-
dlvd. Zone 2 (Calif.) .... lb.	.27	-
dlvd. Zone 3 (W. of Rockies excluding Calif.) .... lb.	.27	-
Acetonitrile, tanks, frt. alld. .... lb.	.53	.54½
Acetophenetidin (see Phenacetin).		
Acetophenone, tech., tanks, f.o.b. works .... lb.	.78	.85
perfume grade, extra, cns. .... lb.	2.15	-
N-Acetyl-p-aminophenol, c.l., t.l. works .... kilo	5.95	6.64
Acetylene black, imp., 50% compressed, 12½-lb. bgs. c.l., t.l. frt. extra .... lb.	.96	-
100%, 25-lb. bgs., same basis .... lb.	.95½	-
Acetylene tetrabromide, tanks, f.o.b. works .... lb.	.97	-
Acetylsalicylic acid, USP (see Aspirin).		
Acetyltributyl citrate, bulk, f.o.b. works .... lb.	1.28	-
Acetyltriethyl citrate, bulk, f.o.b. works .... lb.	2.08	-
Acrolein, tech., tanks, works .... lb.	.82	-
Acrylamide, solid, t.l. works .... lb.	1.00	-
soln., 100% basis tanks, works. . lb.	.74	.77
Acrylic acid, glacial, reg., tanks, dlvd. .... lb.	.67	-
tech., tanks, frt. alld. .... lb.	.60	-
Acrylonitrile, tanks, works. .... lb.	.39½	.45½
Acrylonitrile-butadiene-styrene resin, high-impact, nat., t.l., dms., dlvd. .... lb.	1.09	1.12
medium-impact, nat., same basis lb.	1.05	1.08
low-impact, nat., same basis .... lb.	.98	1.01
Adipic acid, resin grade, bulk, hopper cars, frt. equald. .... lb.	.57	-
bgs., t.l., c.l. frt. equald. .... lb.	.59	-
Agar USP, powd., 60 to 100 mesh., dms. .... lb.	9.80	9.85
Alcohol, syn. C-8 to C-10, tanks, f.o.b. works. .... lb.	.39	-
C-12 to C-13, tanks, dlvd. .... lb.	.57	.59
C-14 to C-15, tanks, dlvd. .... lb.	.57	-
C-16 to C-18, tanks, dlvd. .... lb.	.60	-
Aldehyde, C-6, dms. .... lb.	4.10	5.70
C-7, dms. .... lb.	1.95	-
C-8, dms. .... lb.	4.30	8.30
C-10 dms. .... lb.	3.75	4.25
Algin (see Sodium alginate.)		
Alkali blue, dry, flushed, 110-lb. dms, dlvd. .... lb.	3.72	3.83
Alkali blue prices 1c. higher W. of Rockies.		
Allspice Guatemalan / Honduran, bgs. .... lb.	.97	.98
Jamaican, bgs. .... lb.	1.05	-
Allyl alcohol, tanks, f.o.b., Bayport, Tex. .... lb.	.90	-
Allyl bromide, 500-kilo dms. 2,000 lbs. or more, works. .... lb.	5.50	-
Allyl caproate, 25-lb. cns. .... lb.	3.90	4.50
Allyl chloride, tanks, f.o.b. works... lb.	.65	-
Allyl isothiocyanate, bots. .... lb.	5.40	8.90
Almond oil, artif., bitter (see Benzaldehyde.)		
Almond oil, nat. bitter, NF f.f.p.a. bots. .... lb.	3.50	3.60
sweet .... lb.	1.24	1.50
Aloe, Cape, cs. .... lb.	2.00	-
powd., cs. .... lb.	2.25	2.75
Curacao, kgs. .... lb.	2.60	-
powd., kgs. .... lb.	3.00	-
Aloin, NF, dms. .... lb.	8.00	5.70
Alum, ammonium, tech. gran., bgs., c.l., t.l., works .... 100 lb.	35.00	-
FCC powd., fiber dms., works 100 lbs.	55.00	-
Alum, potassium, tech. gran. bgs., c.l., t.l., works .... 100 lbs.	35.00	-
FCC powd. fiber dms., works . 100 lbs.	55.00	-

Alumina, activated, gran., 100-lb. bgs., 40,000-lb. min. c.l., works. ton	821.00	-
calcined, bulk, same basis .... ton	354.00	-
100-lb. bgs., same basis .... ton	380.00	-
hydrated, white, bulk, same basis .... ton	100.00	-
100-lb. bgs., same basis .... ton	224.00	-
Aluminum acetate, basic, dms., l.c.l., works. .... lb.	3.25	-
Aluminum chloride, anhyd., soln., 500-600 lb. dms., c.l., t.l., works, frt. equald. .... lb.	.53	-
bulk, same basis .... lb.	.46	-
semi-bulk bins, same basis .... lb.	.52	-
Aluminum chloride, coml., soln., 32° tanks, works .... 100 lbs.	15.00	-
ret. dms., c.l., works .... 100 lbs.	12.00	-
non-ret. dms., same basis . 100 lbs.	20.00	-
Aluminum formate, dibasic, liq. 8% Al_2O_3 t.l., works .... lb.	.55	-
Aluminum hydrate (see Alumina, hydrated)		
Aluminum hydroxide, dried, gel, NF, 75-lb. dms., c.l., t.l., works. lb.	2.75	3.50
Aluminum metal, 99½% or more, 50-lb. pigs., 30,000-lb. lots, frt. alld. .... lb.	.78	-
Aluminum oxide amorphous (see Alumina, calcined).		
Aluminum paste, leafing grade, std. lining, 2,400 lb. lots, dlvd. .... lb.	1.40	-
lining, extra-fine, same basis .... lb.	1.99	2.14
Aluminum phenolsulfonate, purif., 100-kilo dms., t.l. .... kilo	8.46	-
Aluminum powder, leafing grade, std. lining, 2,400 lb. lots, dlvd. . lb.	3.17	-
extra fine, lining, same basis .... lb.	4.04	-
Aluminum stearate, bgs., c.l. .... lb.	1.25	1.36
Aluminum sulfate, coml., grd., 100 lb. bgs., c.l., works, frt. equald., basis 17% Al_2O_3 East and Gulf Coasts .... ton	205.00	-
West Coast .... ton	220.60	-
liq., tanks, N.E. same basis .... ton	145.00	-
iron-free, dry, bgs., c.l. same basis .... ton	300.00	-
liq., tanks, same basis .... ton	225.00	265.00
Aluminum sulfate, USP, gran., dms. lb.	-	.337
Aminoacetic acid, USP, dms., 20,000 lbs., f.o.b. works. .... lb.	2.12	-
tech., t.l., same basis .... lb.	1.88	-
p-Aminobenzoic acid, 1,000 kilos or more, dms., f.o.b. works . kilo	8.60	10.10
2-Amino-4-chlorophenol dry and grd., 14,000 lbs. or more, frt. alld. lb.	5.79	-
Aminoethyl ethanolamine, tanks, frt. collect. .... lb.	1.33½	-
N-Aminoethyl piperazine, tanks, f.o.b., frt. collect. .... lb.	1.05	-
2-Amino-2-ethyl-1,3-propanediol dms., t.l. f.o.b. works .... lb.	1.82	-

2-Amino-2-methyl-1-propanol, 95%, dms., c.l., t.l., f.o.b. works . lb.	.05	-
tanks, f.o.b. works .... lb.	.89	-
o-Aminophenol, dms., f.o.b. Charlotte, N.C. .... lb.	3.95	-
p-Aminophenol, t.l. dms., f.o.b. Raleigh, N.C. .... kilo	7.15	-
p-Aminosalicylic acid, USP, 50-kilo dms., t.l. .... kilo	18.50	-
Ammonia, anhyd., fertilizer, wholesale, tanks, dlvd. Midwest terminals .... ton	165.00	170.00
tankcars, f.o.b. Gulf Coast. . ton	80.00	85.00
aqueous, 29.4% NH_3, anhyd. basis, tanks, frt. equald. E. of Rockies. .... ton	280.00	315.00
Ammoniacal liquor (see Ammonia, aqueous).		
Ammoniac sal, galvanizing grade, bgs., c.l., f.o.b. works .... 100 lbs	28.80	-
Ammoniac sal white (see Ammonium chloride coml.).		
Ammonium biborate, gran., dms., c.l. works. .... lb.	.00	-
Ammonium biborate powder 15c. per lb. higher.		
Ammonium bicarbonate, 300-lb. fib. dms., c.l., works. ... 100 lbs.	25.00	-
bgs., c.l. .... 100 lbs.	25.00	-
Ammonium bichromate, photo-litho grade, gran. 100-lb. dms., l.t.l. works. .... lb.	2.00	-
Ammonium bifluoride, bgs., t.l., works. .... lb.	.70	-
Ammonium bromide, dom. NF, gran., dms., c.l., t.l., f.o.b. works . lb.	1.31	-
Ammonium chloride, white, tech., fine gran., bgs., c.l., works. .... 100 lbs.	18.00	-
USP, gran., dms. .... lb.	.40	.53
Ammonium citrate, dibasic, 250-lb. dms. f.o.b. works. .... lb.	2.79	-
Ammonium dimolybdate, approx. 65%, 24,000 lbs. or more . lb.	5.48	-
Ammonium fluoborate, tech., dms., c.l., t.l., works, frt. equald. . lb.	1.79	-
Ammonium heptamolybdate, cryst., dms., 24,000 lbs. f.o.b. works. .... lb.	5.57	-
Ammonium lauryl sulfate, tanks, f.o.b. works. .... lb.	.29	.32
Ammonium lignin, sulfonate, bulk, f.o.b. Hoquiam, Ore. .... ton	72.00	-
Ammonium nitrate, dom., fertilizer grade, 33.5% N. bulk, S.E. dlvd. .... ton	130.00	135.00
Ammonium oxalate, tech., fine, gran. 300-lb. dms., t.t., f.o.b. works. .... lb.	1.42	1.88
Ammonium pentaborate gran. bgs., c.l., works. .... lb.	.75	-
Ammonium pentaborate powder 20c. per lb. higher.		
Ammonium persulfate, 225-lb. dms, 24,000 lbs. or more, f.o.b. works. .... lb.	.58	-
55-lb. bgs., same basis .... lb.	.58½	-
Ammonium phosphate (see Di- and monoammonium phosphates).		
Ammonium silicofluoride, dms. c.l., t.l., works. .... lb.	.30¾	-
Ammonium sulfate lg. gran., bulk, c.l., works. .... ton	80.00	90.00
std., coml., bulk, f.o.b. works .. ton	60.00	70.00
tech., bgs., c.l., t.t., works .... ton	108.00	120.00
Ammonium sulfide, liq., 40-44% tanks, 100% basis, frt. equald. . ton.	460.00	-
Ammonium sulfocyanide, tech. (see Ammonium thiocyanate).		
Ammonium thiocyanate, tech., cryst., bgs., c.l., works .... lb.	1.02	-
tech soln., 50%, tanks, frt. equald., ... lb.	.93	-
Ammonium thiosulfate, photographic, 60%, tanks, f.o.b. works .. lb.	.13	-
Ammonium zirconyl carbonate, soln., bulk. .... lb.	.72	-
Amyl acetate, primary mixed isomers, tanks, dlvd. .... lb.	.57	-
Amyl alcohol, primary mixed isomers, tanks, frt. alld. .... lb.	.48½	-
Amylcinnamic aldehyde, dms. .... lb.	2.85	2.50
p-tert-Amylphenol, bulk works .... lb.	.91	1.03
Amyris oil, dms. .... lb.	11.00	-
Anethole, tech., dms. .... lb.	10.20	-
USP, dms. .... kilo	4.50	4.60
Angelica root oil, bots. .... kilo	700.00	-
Aniline, tanks, f.o.b. works .... lb.	.33	.35½
Anise oil, dms. .... kilo	8.90	-

Anise seed, Chinese, bgs. .... lb.	1.40	-
Spanish, bgs. .... lb.	1.10	-
Turkish, bgs .... lb.	1.05	-
Anisic aldehyde, cns., dms. .... lb.	4.80	5.40
o-Anisidine, imp., dms., dlvd .... lb.	2.27	-
p-Anisidine, imp., cast solid, dms., works .... lb.	1.90	-
flakes, same basis .... lb.	2.25	-
Anthranilic acid, purif., 99% min., dms., t.l., frt. alld. .... lb.	1.70	-
Antimony fluoborate, liq. conc., 175-lb. dms., t.l., works. .... lb.	3.02	-
Antimony metal, bulk, c.l., mines. .. lb.	1.35	1.39
Antimony oxide, high-tint, bgs., c.l., frt. alld E. of Rockies .... lb.	1.25	1.50
Antimony trichloride, anhyd., solid, dms., t.l. works. .... lb.	3.80	-
Apomorphine hydrochloride, NF, bots., ... gm.	15.00	-
Apricot kernel oil, dms .... lb.	2.05	-
Arabic gum, powd., bbls. .... lb.	1.85	2.15
spray dried .... lb.	2.00	2.50
USP grade .... lb.	8.75	9.25
Aromatic petroleum solvents (see Solvent naphtha, petroleum, aromatic).		
Arsenic, crude (see Arsenious trioxide).		
Arylid, red (see Napthol, arylid red).		
Arsenious trioxide, 99%, bulk, c.l., f.o.b. warehouse. .... lb.	.42	.45
Asbestine (see Talc, fibrous).		
Ascorbic acid, USP, 100 kilos, dlvd. .... kilo.	11.00	-
Ash, black (see Barium sulfide).		
Asphalt gilsonite, (see Gilsonite).		
Asphalt petroleum cutback, tanks, E. Coast. .... gal.	.86	-
emulsion, tanks, tankwagons, E. Coast. .... gal.	.66	-
steam-refined, 40-300 penetration, tanks, tankwagon. .... ton	170.00	-
steep roofing grade, bulk tankwagon. .... ton	175.00	-
Aspirin, USP, cryst., powd., 250-lb. dms., c.l., f.o.b. .... lb.	1.95	-
10% starch granulation, white, 250-lb. dm, c.l., f.o.b. .... lb.	1.97	-
16% starch granulation, white, same basis .... lb.	2.80	-
Freight equald. shipt. identical quantity over standard routes from N.Y., Phila., Midland, Mich., Chicago and St. Louis.		
Atropine sulfate, USP, bots .... oz.	10.00	11.00
Avocado oil, dms. .... lb.	4.00	4.50
Azelaic acid, tech., 50-lb. bgs., t.l., c.l., dlvd. .... lb.	1.23	-
Azo orange, bbls., dlvd. .... lb.	7.00	8.50
Azo yellow, 10 G, bgs. dlvd E. of Rockies .... lb.	8.65	-
Azo G yellow pigment, bgs., same basis .... lb.	6.85	-

B

Bacitracin, USP, non-sterile, one billion units or more ... million units	5.30	6.80
Barbital, NF, 50-kilo dms, dlvd. .. kilo	22.50	-
Barbital-sodium, NF, 50-kilo dms. dlvd. .... kilo	23.00	-
Barite, dry-grd., Southern, off-color, coarse, bgs., c.l., f.o.b. mines lo.	.09	.11
water-grd., white, bgs., c.l., f.o.b. works .... lb.	.13	-
unbleached, extra-fine, pigment grade, c.l., f.o.b. works .. ton	180.00	-
Barium carbonate, precip., bulk, c.l., works, frt. equald. .... lb.	.25	-
bgs., same basis. .... lb.	.25½	-
photo grade, bgs., same basis ton	510.00	-
Barium chlorate, 100-lb. dms., 1-10 drn. lots, works. .... lb.	1.04	-
Barium chloride, tech., cryst., bgs., c.l., works .... ton	470.00	-
anhyd. drums c.l., same basis .... ton	590.00	-
Barium chloride, purif., cryst. 400-lb. dms., works .... lb.	3.76	-
Barium monohydrate, 55-lb. bgs., c.l., f.o.b. works .... 100 lbs.	48.00	-
octahydrate, cryst., bgs., same basis .... 100 lbs.	33.00	-
Barium nitrate, 100-lb. bgs., c.l., works .... 100 lbs.	32.50	-

ABBREVIATIONS

THE TERMINOLOGY OF THE CHEMICAL MARKETPLACE

a/alpha
alld./allowed
amorph./amorphous
AMP/American melting point
anhyd./anhydrous
AOAC/Association of Official Agricultural Chemists
a.p.a./available phosphoric acid
approx./approximately
artif./artificial
ASTM/American Society for Testing & Materials
b/beta
Be/Baume
bbls./barrels
b.g./beta-gamma
bgs./bags
bls./bales
bots./bottles
b.p./boiling point
b.p.l./bone phosphate of lime
b.r./boiling range
bxs./boxes
C./Centigrade
cbys./carboys
c.c./cubic centimeters
CD/completely denatured
c.i.f./cost insurance freight
c.l./carload
cns./cans
coml./commercial
conc./concentrated
cp/chemically pure
cps./centipoises
cryst./crystalline
cs./cases
ctns./cartons
cyls./cylinders
d/dextro
dbl./double
denat./denatured
deod./deodorized
dest.-dist./destructively distilled
dl/dextro-laevo
dist./distilled
distr./distributor
dlvd./delivered
dms./drums
dom./domestic
E/East
e.p./end point
equald./equalized
exp./expressed
extr./extracted
F/Fahrenheit
f.a.s./free alongside
ferment./fermentation
f.f.a./free fatty acid
f.f.p.a./free from prussic acid
fib./fiber
f.o.b./free on board
f.p./freezing point
frt./freight
g/gamma
gal./gallon
g.p./general purpose
gran./granular
grd./ground
i.b.p./initial boiling point
imp./imported
incl./included
indust./industrial
kgs./kegs
l/laevo
lb./pound
l.c.l./less carload
l.t.l./less truckload
liq./liquid
m-/meta
m.a.p./mixed aniline point
mfg./manufacturing
mfrs./manufacturers
min./minimum
mol./molten
m.p./melting point
N/nitrogen
n-/normal
nat./natural
neut./neutral
NF/National Formulary
No./number
Nom./nominal
o-/ortho
ord./ordinary
oz./ounces
P/phosphorus
p-/para
Pac./Pacific
pf./proof
phos./phosphate
photo/photographic
pkgs./packages
powd./powdered
precip./precipitated
prod./producer
pt./point
pulv./pulverized
purif./purified
redist./redistilled
refd./refined
refy./refinery
resub./resublimed
ret./returnable
SD/specially denatured
s.d./single distilled
SE/Southeast
sec./secondary
secs./seconds
sp.g./specific gravity
shipt./shipment
soln./solution
std./standard
syn./synthetic
tech./technical
tert./tertiary
t.l./truckload
ton/refers to short ton of 2,000 pounds
TVA/temporary voluntary allowance
t.w./tankwagons
USP/United States Pharmacopeia
vis./viscosity
VM&P/varnish makers & painters
W/West
whse./warehouse
w.w./water-white

NOTE: A unit-ton is 1 percent of 2,000 pounds of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the unit-ton price shown in Chemical Marketing Reporter gives the price of 2,000 pounds of the material.

Barium oxide, grd., dms., c.l. dlvd. .... 100 lbs.	31.25	-
tote bins, same basis, .. 100 lbs	30.00	-
Barium peroxide, 700-lb. dms., c.l., t.l., works .... lb	30	-
Barium stearate, bulk, t.t., f.o.b. dest. .... lb.	1.05	-
Barium sulfate, tech. (see Barite and Blanc fixe).		
Barium sulfate, USP, X-ray diagnosis grade, powd., 25 kilo bgs., 10,000 kilo lots .... lb.	.58½	-
Barium sulfide (black ash), dms., c.l., works. .... ton	460.00	-
Basil Egyptian .... lb.	.65	.95
French. .... lb.	.84	-
Basil oil, Comores .... lb.	55.00	-
Basil oil, Egyptian .... lb.	62.00	-
Battery acid, t.l., f.o.b., works .... ton	52.00	70.75
Bauxite, calcined, refractory grade, 87½-88% Al_2O_3, Baltimore & Mobile. .... metric-ton	229.28	-
Bay oil, NF, 50-55%, dms. .... lb.	11.00	-
Bayberry wax, bgs. .... lb.	2.70	3.00
Beeswax, refd., bleached white, bricks, 100-lb. ctns .... lb.	3.10	3.20
white, slabs, 100-lb. ctns. .... lb.	3.05	3.10
yellow, bricks, 100-lb. ctns. ... lb.	3.00	3.10
yellow, slabs, 100-lb. ctns. ... lb.	2.85	3.05
Bentonite, dom., c.l. bags, f.o.b. works. .... ton	43.50	-
Benzaldehyde, NF, dms., ... lb.	1.25	-
tech., dms., c.l., t.l., ... lb.	73	.83
Prices are 4c. per lb. higher West of the Rockies.		
Benzene, indust. or nitration, barges, f.o.b.		
Baton Rouge, La. .... gal.	.98	-
Baytown, Tex. .... gal.	.98	-
Beaumont, Tex. .... gal.	.98	-
Catlettsburg, Ky. .... gal.	.98	-
Chicago district .... gal.	.98	-
Chocolate Bayou, Tex. .... gal.	.98	-
Clairton, Pa. .... gal.	.98	-
Corpus Christi, Tex. .... gal.	.98	-
Deer Park, Tex. .... gal.	.88	-
Houston district, spot .... gal.	1.15	-
Lima, Ohio .... gal.	.95	-
Wood River, Ill. .... gal.	.96	-
Benzene hexachloride, 99% gamma isomer (see Lindane).		
Benzidine orange, powd., bgs. dlvd. lb.	4.90	8.70
liq., containers, dlvd. .... lb.	3.38	3.80
Benzidine yellow, AAA, bgs., dlvd. . lb.	5.80	8.05
AAOA, bgs., dlvd. .... lb.	7.35	7.40
AAOT, bgs., dlvd. .... lb.	5.95	6.20
Benzocaine, USP, dms., 1,000 kg. lots, f.o.b. works .... kg.	10.00	11.50
Benzodihydropyrone, dms. .... lb.	12.50	-
Benzoic acid, tech., bgs., c.l., t.l., f.o.b. works. .... lb.	.55	.58
USP cryst., dms., ton lots same basis .... lb.	1.73	1.75
Benzoin gum, Sumatra, cs. .... lb.	1.80	-
Benzophenone, N.F., 1,000 lbs. or more, f.o.b. .... lb.	3.50	3.80
N.F., 1,000 kilos or more, f.o.b. ... kg.	7.45	-
tech. 1,000 kilos or more, fob works. .... kgs.	4.35	-
2,2-Benzothiazyl disulfide (see Mercaptobenzothiazyl disulfide).		
Benzotriazole, flake, dms., 1,000 lbs. or more, f.o.b. works .... lb.	5.10	-
powd., dms., 1,000 lbs. or more, same basis .... lb	6.20	-
photo-grade, dms., 1,000 lbs. or more, same basis. .... lb.	0.90	-
Benzotrichloride, refd., dms. t.l., frt. equald. .... lb.	.87	-
tanks, frt. equald .... lb.	.80	-
Benzoyl chloride dms., c.l., works .. lb.	.57	.59
tanks, frt. equald. .... lb.	.74½	.75
Benzoyl peroxide, regular gran., 10,000-lb. lots or more, bgs., works, frt. equald. .... lb.	2.35	8.98
paste, 50% and 55% formulations, dms., pails, frt. equald. ... lb.	1.71	1.95
Benzyl acetate, dms. .... lb.	1.00	1.25
Benzyl alcohol, N.F. t.l. dms. frt. equald. .... lb.	1.25	1.85
tanks, same basis	1.37	1.43
photo grade, t.l., dms., same basis .... lb.	1.40	-
tanks, same basis	1.34	-
tech. grade, t.l., dms., same basis lb.	1.32	-
tanks, same basis	1.26	-
Benzyl benzoate, dms. .... lb.	1.65	2.25
Benzyl chloride, tech., non-ret. dms., c.l., t.l., frt. equald. .... lb.	.59	-
tanks, f.o.b. .... lb.	.54	-
Benzyl cinnamate, 25-lb. cns. .... lb.	8.50	9.95
n-Benzyl-N,N-dimethylamine, t.l., dms., f.o.b. works .... lb.	2.30	-
Benzyl formate, dms. .... lb.	10.50	-
6-tert-Butyl-m-cresol (see Mono-tert-butyl-m-cresol).		
Benzyl isoeugenol, dms. .... lb.	15.50	-
Benzyl propionate, dms. .... lb.	3.35	-
Benzyl salicylate .... lb.	2.90	3.25
Benzylidine acetone, cns., bots. ... lb.	2.95	3.25
Bergamot oil .... kilo	44.75	-
Betahydroxynaphthoic acid (see b-Oxynaphthoic acid).		
Biotin, cryst., 500 gms. or more ... gm.	8.00	5.50
Biphenyl (see Diphenyl).		
Bismuth nitrate, purif. cryst., 100-lb. dms., frt. equald. .... lb.	10.00	-
Bismuth oxychloride, 100-lb. dms., works. .... lb.	17.20	-
Bismuth subcarbonate, USP, medium powd., 225-lb. dms., works. lb.	15.31	15.50
Bismuth subgallate, purif., 100-lb. dms., works. .... lb.	10.50	-
Bismuth subnitrate NF, powd., 200-lb. dms., works. .... lb.	14.45	-
Bismuth subsalicylate, purif. powd., 50-100 lb. dms., works. ... lb.	17.00	-
Bismuth trioxide, reagent. powd., 100-lb. dms., works. .... lb.	15.00	15.45
Bisphenol-A, epoxy grade, hopper cars, dlvd. .... lb.	.67	-
polycarbonate grade, same basis lb.	.71	-
Blanc fixe, syn., imp., bags .... lb.	.20	-
Bois de rose oil, Braz., dms. .... lb.	6.75	-
BON toner (red 48) dms., frt. alld. .. lb.	7.25	8.05
(red 52) dms., same basis. .... lb.	6.50	7.90
Bonemeal, steamed, dom., bgs., c.l. f.o.b. Midwest plants. ... ton	180.00	190.00
Bone phosphate, defluorinated of lime (see Defluorinated phosphate).		
Bone phosphate, precip. (see Calcium phosphate tribasic).		
Borax, tech. anhyd. 99%, bgs., c.l., works. .... ton	647.00	-
bulk, c.l., works .... ton	602.00	-

Borax, tech., gran., decahydrate, 99½% bgs., c.l., works .. ton	237.00	-
bulk, c.l., works .... ton	192.00	-
tech., pentahydrate, gran. 99½%, bgs., c.l., works. .... ton	255.00	-
bulk, c.l., works .... ton	220.00	-
Borax, NF (see Sodium borate).		
Boric acid, tech., gran., 99.9%, bgs., c.l., works. .... ton	814.00	-
bulk, c.l., works .... ton	569.00	-
Boron trichloride, CP, 1,800-lb. cyls., works. .... lb.	3.60	-
Boron trifluoride, 60-lb. cyls., t.l., f.o.b. works. .... lb.	4.03	-
bulk, same basis .... lb.	3.47	-
Boron trifluoride, etherate, 500-lb. dms., t.l., f.o.b., works. ... lb.	2.35	-
phenolate, 500-lb. dms., t.l., same basis .... lb.	1.65	-
Bromine, dms., t.l., works .... lb.	.87	-
bulk, 45,000-lb. min., works ... lb.	.33	.34½
purif., t.l., dlvd. .... lb.	.75	-
Bromine dlvd., prices for dms. and bulk shipped W. of Rockies, 1c.- per-lb. higher. Bulk t.t. prices 1c. to 2½c.-per- lb. higher for 30,000-lb. min. and 4c. to 5½c.-per-lb. higher for 15,000-lb. min.		
Bromochloromethane, dms., c.l., f.o.b. Midland .... lb.	1.12	-
Butadiene, tanks, f.o.b. .... lb.	.12½	.18
1,4-Butanediol, tanks, f.o.b., frt. equald. .... lb.	.80	-
dms., same basis. .... lb.	.88	-
Butene-1, tanks, f.o.b. works. ... lb.	.28	.28
n-Butyl acetate, syn., tanks, frt. alld. lb.	.52½	-
n-Butyl acrylate, tanks, frt. alld. E. . lb.	.69	-
n-Butyl alcohol, syn., ferment, tanks, frt. alld. .... lb.	.34	-
sec-Butyl alcohol, syn., tanks, dlvd. lb.	.385	-
tert-Butyl alcohol, syn., tanks, dlvd. E. .... lb.	.70	-
Butyl aldehyde (see Butyraldehyde)		
Butyl benzyl phthalate, tanks, frt. alld. .... lb.	.59	-
Butyl chloride, tanks, works. .... lb.	.99	1.00
Butyl cyclohexyl phthalate, tanks, dlvd. .... lb.	.74	-
n-Butyl ether, dms., c.l., t.l., works. lb.	1.85	-
Butyl isodecyl phthalate, tanks, dlvd. .... lb.	.35	-
n-Butyl lactate, tanks, f.o.b. works lb.	1.58	-
n-Butyllithium, 15% soln., 1,000-lb. lots or more, cyls., 100% basis, dlvd. .... lb.	15.45	-
tanks, 3,000-lb. min., 100% basis, dlvd. .... lb.	14.75	-
Butyl methacrylate, tanks, frt. equald. .... lb	.86	-
Butyl octyl phthalate, tanks, dlvd. E. .... lb.	.40	.42
Butyl oleate, dist., dms., c.l. .... lb.	.70	.82
tanks. .... lb.	.80	.75
p-tert-Butylphenol, tanks works ... lb.	.70	-
Butyl phthalate (see Dibutyl phthalate).		
Butyl stearate cosmetic, dms., 77 dms. or more. .... lb.	.91	.97
tanks. .... lb.	.92	-
Butyl stearate tech., t.l. .... lb.	.50	.52
tanks .... lb.	.55	.58
Butylamine (see Mono-, Di- and Tributylamine).		
tert-Butylamine, dms., c.l., t.l., f.o.b. works. .... lb.	1.31	-
tanks, same basis. .... lb	1.17	-
Butylated hydroxyanisole, food grade, dms., dlvd. .... lb.	8.60	8.85
Butylated hydroxytoluene, food, feed grades, c.l., t.l., bgs., dlvd. . lb.	1.27	1.40
tech., bgs., c.l., t.l., dlvd. .... lb.	1.25	1.38
1,3-Butylene glycol, tanks, dlvd. ... lb.	.72	-
Butyraldehyde, tanks, dlvd. .... lb.	.29½	.38
Butyric acid, tanks, frt. alld .... lb.	.44½	-
Butyric ether (see Ethyl butyrate).		
Butyrolactone, tanks, f.o.b. plant. .. lb.	1.20	-
n-Butyronitrile, dms., c.l., dlvd. ... lb.	.93	-
tanks, dlvd. .... lb.	.54	-

C

Cadmium chloride, purif. cryst., 100-lb. dms., t.l., works. .... lb.	3.73	-
Cadmium, CP, red, dark shade, bbls., 100-lb. lots, frt. alld., E. of Rockies .... lb.	11.33	18.35
light shade, bbls., same basis ... lb.	9.18	12.06
medium shade, bbls., same basis. lb.	10.69	15.20
medium-light shade, bbls., same basis. .... lb.	10.26	14.50
Cadmium, CP yellow, all shades, bbls., 100-lb. lots, frt. alld., E. of Rockies. .... lb.	8.10	7.07
Cadmium fluoborate, liq. conc., dms., t.l., works, frt. equald. ... lb.	2.27	-
medium-light shade, bbls., same basis. .... lb.	3.22	-
Cadmium-mercury lithopone, maroon shade, bbls., frt. alld. E. of Rockies. .... lb.	4.60	-
Cadmium metal ingots or sticks, ton lots, cs., dlvd. .... lb.	1.20	1.50
Cadmium nitrate, purif., flake 400-lb. dms., c.l., t.l., f.o.b. ship. pt. lb.	2.10	-
Cadmium-selenide-lithopone, orange, light shade, bbls., 400-lb. lots, frt. alld. E. of Rockies. ... lb.	3.97	4.00
deep shade, bbls., same basis. .. lb.	4.47	4.50
Cadmium-selenide lithopone, red, dark shade, bbls., same basis. . lb.	6.77	8.80
light shade, bbls., same basis. ... lb.	5.27	5.30
medium light shade, bbls., same basis. .... lb.	5.72	5.75
medium shade, bbls., same basis. lb.	6.37	6.40
maroon shade, bbls., same basis lb.	7.47	-
Cadmium-selenide lithopone, yellow, all shades, bbls., same basis. . lb.	2.97	3.00
Cadmium sulfate, 50-lb. dms., any quantity, f.o.b. ship. pt. ... lb.	4.05	-
Caffeine, dom., USP, syn. cryst. anhyd., powd., 100-lb. dms., c.l., t.l., frt. alld. .... lb.	6.60	-
imp., cryst., anhyd., powd., dms., 10,000 lbs. or more. .... lb.	5.80	-
Calamine, USP, dms. .... lb.	1.50	1.70
Calamus oil, dms. .... lb.	26.80	35.00
Calciferol. (see Ergocalciferol).		
Calcium acetate, purif., powd., dms. t.l., works. .... lb.	.87	-

Calcium carbide, std., generator size, bulk, c.l., f.o.b., works, ... ton	402.00	-
Calcium carbonate, pulverized, 325-mesh, bgs., bulk, f.o.b. works. .... ton	46.00	-
slurries, 54% solids, same basis .... ton	97.00	100.00
72% solids, same basis ... ton	109.27	-
quicklime, gran., ind., bulk, works. .... ton	100.93	-
Calcium carbonate, coated, bgs., c.l., works. .... lb.	.0630	.1600
Calcium carbonate, precip., bgs., c.l., t.l. .... ton	365.00	445.00
Calcium carbonate precip. medium, bgs., c.l., works. .... ton	110.00	150.00
precip. dense. bgs., c.t., surface treated, bgs., c.l., works. . ton	265.00	-
ultrafine, USP, bgs., c.l., works. .... ton	217.00	225.00
Calcium chloride, conc., reg. grade. 77-80%, flake, bulk, c.l., works. .... ton	153.00	-
100-lb. bgs., c.l., same basis .... ton	198.00	-
anhyd., 94-97%, flake or pellet, bulk, c.l., same basis .... ton	217.00	-
80-lb. bgs., c.l., same basis... ton	279.00	-
brining grade, 80-lb. bags .... ton	285.00	-
Calcium chloride, liq., 100 percent basis, t.c., t.l., barge .... ton	99.75	-
45% same basis .... ton	118.00	-
Calcium chloride, USP, gran., 225-lb. dms., t.l., frt. equald. .... lb.	.90	-
Calcium citrate, purif., 200-lb. dms., 10,000 lbs. or more, f.o.b. works. .... lb.	3.82	-
Calcium cyanamide, indust., anhyd. dms., works. .... ton	400.00	460.00
Calcium gluconate, USP powd. t.l. . lb.	1.80	-
Calcium hydride, lump, dms., 25-1,000-lb. lots. works. .... lb.	10.50	13.25
Calcium hypochlorite, 100-lb. dms., truckloads ship, t. E. of Rockies. .... 100 lbs.	92.40	-
Calcium hypophosphite, dms., bulk, 500 kilos or more .... kilo	13.75	14.50
Calcium iodate, FCC dms., f.o.b. works. .... lb.	5.60	-
Calcium iodide, 50-kilo dms., f.o.b. works. .... kilo	23.65	25.85
Calcium lactate, NF, powd., pentahydrate, dms., 24,000 lbs. or more, f.o.b. works .... lb.	2.00	-
NF, gran., trihydrate, same basis. lb.	2.10	-
special gran., dried grade, same basis .... lb.	2.80	-
Calcium naphthenate, liq., 4% Ca., c.l., f.o.b. plant, E. of Rockies. . lb.	85	-
d-Calcium pantothenate, USP, 100-500-kilo lots. .... kilo	12.50	-
dl-Calcium pantothenate, feed grade, f.o.b. frt. alld., 250 kilos or more .... kilo	8.00	8.50
dl-Calcium pantothenate, calcium chloride complex, feed grade, 160 grams per lb., f.o.b., frt. alld., 500 lbs or more .... lb.	2.75	-
Calcium phosphate, dibasic, feed grade, 18½% P. bulk, c.l., t.l., f.o.b. works .... ton	226.00	-
Calcium phosphate, dibasic, dihydrate, USP, bgs., c.l., t.l., works, frt. equald. .... 100 lbs.	62.50	-
anhyd., USP, same basis. . 100 lbs.	71.75	-
dentifrice grade, same basis. 50 lbs.	49.90	-
Calcium phosphate, monobasic, monohydrate, food grade, bgs., c.t., t.l., works, frt. equald. .... 100 lbs.	50.50	-
anhyd., food grade, same basis. .... 100 lbs.	54.95	-
tribasic, NF precip., bgs., c.l., frt. equald. .... 100 lbs.	62.50	-
Calcium propionate, dms., 2,000 lbs. or more f.o.b. frt. alld. .... lb.	.50	.55
Calcium silicate, hydrated, bgs., c.l., works. .... lb.	.07	-
Calcium silicate, paint grade (see Wollastonite).		
Calomel, NF, mild powd., 100-lb. dms., f.o.b. works. .... lb.	8.50	-
Camphene chlorinated, 67-69% (see Toxaphene).		
Camphor, monobromated, dms., kgs. .... lb.	3.63	3.70
Camphor, syn., tech., 165-lb. dms., 5,000 lbs. or more .... lb.	1.80	-
USP, powd., 165-lb. dms., 5,000 lb. lots or more. .... lb.	2.36	-
syn., refd., 1-oz. tablets, ctns. 1,000-lb. lots or more .... lb.	3.50	-
Camphor oil, yellow, 25-lb. dms ... lb.	1.65	-
white, dms. .... lb.	2.00	-
spec. grav., 1.070, dms. .... lb.	2.65	2.85
Cananga oil, Indonesian, dms. ... kilo	17.50	-
Candelilla wax, crude, bgs. .... lb.	1.90	-
refd. pure, bgs. .... lb.	2.10	-
Capric acid, coml, pure, dms. .... lb.	.80	.85
tanks .... lb.	.90	.65
Capric aldehyde (aldehyde C-10) dms., cns. .... lb.	3.95	5.35
Caprolactam monomer, flake, bgs., t.l., f.o.b. shipping point .... lb.	.87	-
molten, tanks, same basis. .... lb.	.85	-
Capryl alcohol sec. 92-99% tanks, f.o.b. works. .... lb.	.35	-
Caprylic acid, coml. pure tanks. ... lb.	.73½	-
Capsicum (see Pepper, red).		
Capsicum oil (see Capsicum oleoresin).		
Capsicum oleoresin, NF, from dom., pepper, dms. .... lb.	11.00	-
NF, from African pepper, dms. 500,000 pungency .... lb.	9.00	-
1,000,000 pungency .... lb.	17.00	18.00
Caraway oil, Poland, dms. .... lb.	22.00	25.00
Caraway seed, Dutch, bgs. .... lb.	.64	-
Egyptian, bgs. .... lb.	.47	.50
Carbon black, furnace, fast extruding (FEF), bulk, c.l., works. .... lb.	.2125	-
bgs., c.l. works. .... lb.	.2425	-
general purpose (GPF), bulk, c.l., works. .... lb.	.2075	-
bgs., c.l. works. .... lb.	.2375	-
high abrasion (HAF), high structure, bulk, c.l. works. .... lb.	.2300	-
bgs., c.l. works. .... lb.	.2600	-

CHEMICAL PRICES

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Carbon black, low structure, bulk, c.l. works. .... lb.	.240	.260
bags, c.l. works .... lb.	.270	.290
Intermediate-super-abrasion (ISAF). .... lb.	.25	-
bgs., c.l. works. .... lb.	.28	-
super-abrasion (SAF), bulk, c.l., works. .... lb.	.31	-
bgs., c.l., works. .... lb.	.4050	-
semi-reinforcing (SRF), bulk, c.l., works. .... lb.	.210	-
bgs., c.l., works. .... lb.	.240	-
Carbon black, thermal, medium, bgs. c.l., works. .... lb.	.30	.30½
bulk, c.l. works. .... lb.	.32	.34½
Carbon black oil, barge, f.o.b. Gulf refineries .... bbls.	10.60	12.50
f.o.b. W. coast refineries .... bbls.	10.50	12.50
Carbon disulfide, t.c., f.o.b. works ton	420.00	-
Carbon tetrachloride, CP, consumers, dms., c.t., frt. alld. .... lb.	.36	-
tech., dms., c.l., t.l., frt. alld. .... lb.	.31	-
tank transport (min. 4,000 gals.) frt. alld. .... lb.	.24	-
Carboxymethyl cellulose (see CMC).		
Cardamom oil, NF, bots. .... lb.	56.00	-
Cardamoms, decort, Guatemalan. . lb.	2.90	-
green, Guatemalan, bgs. .... lb.	5.75	7.50
Carmine, No. 40, NF, bulk, 100-lb. lots or more, dlvd. .... lb.	135.00	140.00
Carnauba wax, Parnahyba, No. 1, yellow, bgs., ton lots. .... lb.	1.95	2.05
Ceara, No. 1, yellow, bgs., ton lots. .... lb.	1.75	1.90
North Country, No 2, refined, bgs., ton lots .... lb.	1.55	1.65
Carnauba wax, North Country No. 3, centrifuged, bgs., ton lots . lb	1.10	-
North Country, No. 3, refined, bgs., ton lots .... lb.	1.30	1.45
Powdered carnauba wax, 20 to 100 mesh, 20c. per lb. higher.		
b-Carotene, in vegetable oil, semi-solid suspension, 400,000 A units per gram., 33 lbs. or more.. lb	32.75	-
b-Carotene, liq. in vegetable oil. 500,000 A units per gram., 33 lbs. or more. .... lb	40.75	-
b-Carotene, dry, beads, 10%, 167,000 A units per gram 50-lb. cns lb	26.85	-
d-Carvone, 25-lb. dms, syn .... lb.	48.00	-
l-Carvone. .... lb	7.00	7.25
Cascara sagrada bark, bulk .... lb.	1.00	-
Casein, imp., acid-precip. grd. 30-mesh, Australian, edible, same basis c.l. .... lb	1.45	-
Australian, indust. same basis c.l. .... lb	1.365	-
Cassella acid, 303 mol. wt., dms., frt. alld., 100% basis .... lb	3.70	-
Cassia, Korintji "A" bgs. .... lb.	1.08	1.20
"B" bgs. .... lb	.85	.05
Cassia oil, Chinese, dms .... lb.	18.50	-
Castor oil, raw, No. 1, Braz. tanks. lb.	.32	.34
USP 5-9 dms. .... lb.	.74	-
refd. deod., 5-9 dms .... lb.	.78	-
blown, 5-9 dms. .... lb.	.75	-
dehydrated, bodied, tanks. .... lb.	.74	-
dehydrated, unbodied, tanks. .. lb.	.65	-
Castor oil, acids dehydrated, dms. . lb.	1.10	-
ricinoleic acid. .... lb	.79½	.83
Castor pomace, bgs., container load. f.o.b., Miami, Fla. .... ton	154.00	-
Castoreum, nat., cns. .... lb.	18.00	35.00
syn., cns. .... lb.	11.00	-
Catechol, CP, 45-kilo dms., 50-239 dms., f.o.b. .... kilo.	7.93	-
tech., bgs., t.t., same basis .... kilo.	3.71	-
Caustic potash (see Potash, caustic)		
Caustic soda (see Soda, caustic).		
Cedarleaf oil, dms. .... lb.	17.50	-
Cedarwood oil, Chinese, dms., cns. lb.	1.15	-
.... lb.	1.75	2.60
Texas. .... lb.	4.75	-
Virginia. .... lb.	5.25	-
Cedrol, prime dms .... lb.	4.25	5.30
Cedryl acetate, dist., dms. .... lb.	.46	-
Celery seed, Indian, bgs. .... lb.	37.00	-
Celery seed oil .... lb.		
Cellulose acetate, powd., bgs., t.l., dlvd. E. .... lb.	1.30	-
Cellulose acetate butyrate, powd., 17% butryl content, bgs., t.l., dlvd. E. .... lb.	1.75	-
38% butryl content, bgs., dlvd. E. . lb.	1.59	-
50% butryl content, bgs., dlvd. E. . lb.	1.81	-
55% butryl content, bgs., dlvd. E. . lb.	1.63	-
Cellulose gum, pure, high vis., bgs., 24,000-lb. lots or more works, f.o.b. Hopewell, Va. .... lb.	1.60	1.70
std., low or medium vis., bgs., c.l., t.l., f.o.b. Hopewell, Va. ... lb.	1.60	1.90
Cerium concentrate CeO_2, 50 lbs. .. lb.	1.35	-
Cerium hydroxide 90% CeO_2, dms., works. .... lb.	5.40	-
77% CeO_2, dms., works. .... lb.	4.20	1.60
Cerium oxide, optical grade, bgs., 50-lb. lots or more, dlvd. .... lb.	1.65	1.90
Cetyl alcohol, NF, cns., c.l., t.l., dlvd. E. lb.	.68½	1.27
Chalk (see Calcium carbonate).		
Chamomile flowers, Hungarian, cs. . lb.	4.25	4.60
Roman, cs. .... lb.	4.94	-
Egyptian, whole .... lb.	2.70	3.00
Chamomile oil, blue, Egyptian .... lb.	545.00	-
blue, Hungarian. .... lb.	370.90	-
Chenopodium oil, NF, cns. .... lb.	15.00	-
Chicago acid, dry, bbls., frt. alld. ... lb.	13.80	-
Chilies (see Pepper, red).		
Chlorendic anhydride, tech., dms., t.l., works. .... lb.	1.30	-
Chlorinated paraffin, 40% chlorine, bulk, dlvd., Zone 1 .... lb.	.45	.46½
50% chlorine, same basis .... lb.	.46	.47½
60% chlorine, same basis .... lb.	.46½	.48½
70% chlorine, resinous, 50-lb. bgs., c.l., dlvd., Zone 1 .... lb.	.59	-

CHEMICAL PRICES

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Chlorinated paraffin, Zone 2 prices are 1c. per lb. higher and Zone3 prices are 2c per lb. higher and t.l. drum prices are 5c per lb. higher

Chlorinated rubber, 5, 10, 20 cps., bgs., t.l., dlvd. .... lb.	1.66	-
40 cps, bgs., t.l., dlvd. .... lb.	1.92	-
125 cps., bgs., t.l., dlvd. .... lb.	2.60	-
300 cps., bgs., t.l., dlvd. .... lb.	2.75	-
Chlorine, tanks single units works, f.o.b., frt. equald. .... ton	195.00	200.00
Chloroacetic acid, mono, high purity, flake, 99% bulk f.o.b. works. .... lb.	.56	-
2-Chloro-4-aminotoluene, tech., liq., dms., c.l., t.l., f.o.b. works. lb.	1.88	-
o-Chloroaniline, liquid, dms., c.l., f.o.b. works .... lb.	1.63	-
tanks, same basis .... lb.	1.55	-
p-Chloroaniline, solid, c.l., t.l., f.o.b. lb.	1.70	-
flake, dms., c.l., same basis .... lb.	2.00	-
o-Chlorobenzaldehyde, dms., t.l., works .... lb.	2.45	-
p-Chlorobenzaldehyde, dms., 2,000 lbs. or more, works .... lb.	3.64	3.85
o-Chlorobenzoic acid, dms. t.l. wks. . lb	3.90	-
p-Chlorobenzoic acid, dms., 500-lb. lots or more, works .... lb.	1.69	2.25
Chloroform, tech. tanks, distr. dlvd. . . lb.	.34½	-
tech., consumers, tanks, dlvd. . . . lb.	.84½	-
NF tanks, min., consumer, 4,000 gals. dlvd. .... lb.	.35½	-
2-Chloro-4-nitroaniline, paste, commodity basis, dms., t.l., f.o.b. .... lb.	3.08	-
powd., same basis .... lb.	3.15	-
4-Chloro-2-nitroaniline, paste, 172.5 mol. wt., commodity basis, dms., t.l., f.o.b. .... lb.	2.25	-
powd., same basis .... lb.	2.70	-
o-Chlorophenol, dms., c.l., frt. equald. .... lb.	2.00	2.40
p-Chlorophenol, dms., c.l., frt. equald. .... lb.	1.25	1.70
Chloropicrin, coml., 1,500-lb. cyls., t.l., f.o.b. works. .... lb.	1.25	-
Chlorosulfonic acid, tanks, frt. equald. .... lb.	.16½	-
p-Chlorotoluene, tech., tanks, works .... lb.	1.00	-
Cholecalciferol, dry, 40,000,000 units per gram, kilo lots .... gm.	24.00	-
Choline bitartrate, cryst., 98% min., 50 kilo dms., f.o.b. Springfield, Mo. .... kilo.	8.90	-
Choline chloride, feed grade, 70% aqueous, t.c., t.t., dlvd. E of Rockies .... lb.	.28	-
60% dry supplement .... lb.	.38	-
Choline chloride, 60% dry supplement, bulk hopper cars .... lb.	.38	-
bgs., 50,000 lbs. min. .... lb.	.40	-
Choline chloride, pharmaceutical, 50 kilo, lots, f.o.b. Springfield, Mo. .... kilo.	5.00	-
Choline dihydrogen citrate, 98% min., 50 kilo lots, f.o.b. Springfield, Mo. .... kilo.	6.00	-
Chrome green, CP extra light, bgs., dlvd. E. of Rockies .... lb.	1.68	-
light, bgs., same basis .... lb.	1.70	-
medium, bgs., same basis .... lb.	1.72	-
extra deep, CP., same basis .... lb.	1.74	-
Chrome orange, CP, bgs., dlvd. E. of Rockies .... lb.	.83	.89
Chrome yellow CP bbls., dlvd. E. of Rockies .... lb.	1.09	1.18
Chromic acid, 99¾%, flake dms., c.l., frt. equald. .... lb.	1.18	-
grd., same basis .... lb.	1.25	-
Chromium acetate, soln., 7½%, dms., 500-2,000-lb. lots, works. lb.	.10	-
Chromium fluoride, dms., t.l., works .... lb.	.81	-
Chromium nitrate, dms., t.l., f.o.b. . . lb.	1.45	-
10% metal soln., 500-lb. dms. same basis .... lb.	.74	.88
Chromium oxide, hydrated, 50-lb. bgs., c.l. .... lb.	5.50	-
pure, bgs., c.l. .... lb.	1.90	2.00
Cinnamic aldehyde, cns., dms. .... lb.	1.85	1.95
Cinnamic alcohol, 25-lb. cns. .... lb.	4.50	-
Cinnamon, H2 .... lb.	1.10	1.15
Cinnamon bark oil, bots. .... lb.	105.00	110.00
Cinnamon leaf oil, dms. .... lb.	2.65	-
Citral, nat., dms. .... lb.	5.50	6.85
syn., 55-gal. dms. f.o.b. .... lb.	3.19	-
Citric acid, USP, hydrous, gran., 250-lb. dms., t.l. .... lb.	1.19	-
Citric acid, USP, anhyd., gran. 250-lb. dms., t.l., del. .... lb.	.89	-
Citric acid anhyde, powder bc. higher		
Citronella oil, Java, dms. .... lb.	2.50	-
China, dms. .... lb.	2.50	-
Citronellal, 25-lb cans .... lb.	3.85	7.40
Citronellol drums, f.o.b. .... lb.	3.68	-
Citronellyl acetate, dms. .... lb.	5.50	6.50
Citronellyl formate, 25-lb. cns. .... lb.	6.85	-
Civet, artif., bots. .... lb.	20.00	-
nat. .... lb.	400.00	-
Clay ball, dom. air floated, bgs., c.l. Tenn. .... ton	49.00	-
dom., crushed, moisture-repellent, bulk, c.l., Tenn. .... ton	24.00	-
Clay China (see Kaolin).		
Cleaners, naphtha, 140° flash tanks, New Jersey or New York, dlvd. .... gal.	1.40	-
Clove leaf oil Indonesian, reg. dms. kilo	3.15	-
Madagascan, reg. .... kilo	3.40	-
Clove bud oil .... kilo	25.00	26.00
Cloves, Brazil .... lb	2.10	-
Zanzibar .... lb.	2.10	-
Madagascan .... lb.	2.10	-
CMC, technical, 96% minimum, low or medium vis., bgs., 24,000 lbs., f.o.b. Hopewell, Va., 100% basis .... lb.	1.26	-
detergent makers, f.o.b. manufacturing point. .... lb.	.64	-
CMC, purif., high vis., (see Cellulose gum).		
Coal tar pitch, indust., liq., works . ton.	250.00	255.00
roofing, 140-155, Federal specification RP-381 Type 1, bulk works. .... ton	350.00	-
Cobalt acetate, dms., t.l., frt. alld. . . lb.	3.91	4.25
Cobalt carbonate, powd., dms., frt. alld. .... lb.	6.81	8.16
Cobalt chloride, dms., 5,000 lbs. or more, frt. equald. .... lb.	4.15	-
Cobalt hydrate, dms., t.l., frt. alld. . . lb.	8.20	10.55
Cobalt metal, 99.5-99.9%, 250-kilo. dms., f.o.b. NY, Chicago. . lb.	7.00	-
Cobalt naphthenate, liq., 6% Co., dms., dlvd. .... lb.	2.06	-
Cobalt nitrate, dms., t.l., frt. alld. . . lb.	2.74	3.45
Cobalt oxide, imp., black, 72-73% Co. .... lb.	9.51	-
Cobalt oxide, imp., 70-71% Co. . . . lb.	9.78	-
Cobalt phosphate powd. 32.1% Co., dms., dlvd. .... lb.	1.35	-
Cobalt resinate fused, 3% Co., dms. .... lb.	.38½	-
Cobalt sulfate, cryst., bgs., 10,000 lbs. or more, frt. alld. E. .... lb.	2.81	3.54
monohydrate, dms., frt. alld. . . . lb.	4.58	8.02
Cobalt tallate, 6% Co., dms., dlvd. . lb.	2.18	-
Cocillana bark, bls. .... lb.	.40	.45
Cocoa butter, spot. .... lb.	2.05	-
Coconut oil (See Oils, Fats & Waxes market report.).		
Coconut oil acids, distilled, t.c., f.o.b. .... lb.	.52	.58
double distilled, same basis . . . lb.	.54	.63
Cod oil, f.o.b., Gloucester, Mass., bulk. .... gal.	6.60	-
Codeine alkaloid, NF, 25-kilo lots, .kilo.	900.00	-
Codeine phosphate, USP, cns., 25-kilo lots. .... kilo	640.00	-
Codeine sulfate, NF cns., 25-kilo lots. .... kilo	775.00	-
Codliver oil, NF, dms. .... gal.	6.60	7.25
Copaiba balsam, dms. .... lb.	1.50	-
Copaiba oil, cns., dms. .... lb.	3.75	-
Copper acetate, monohydrate, cryst., tech., dms., t.l., works. . . . lb.	.71	.74
Copper bromide, (cupric) 200-lb. dms., 100,000-lbs. -per-year contracts, works .... lb.	1.34	-
Copper carbonate, 55% Cu, dark, dense, 50-lb. bgs., c.l., t.l., works. .... 100 lbs.	108.60	-
light, fluffy, 50 lb. bags, c.l., t.l., works. .... 100 lbs.	109.30	-
Copper chloride (cupric), anhyd., c.l., works. .... lb.	.90	-
Copper cyanide, tech. dms., 24,000-lb. lots or more. .... lb.	2.30	2.62
Copper fluoborate, (cupric), liq. conc., dms., t.l., works, frt. equald. .... lb.	.82	-
Copper gluconate, FCC grade, 25-lb. dm., frt. equald. .... lb.	6.50	-
Copper metal electrolytic wire bars, dlvd., domestic basis. .... lb.	.62½	-
Copper naphthanate, liq., 8% Cu., dms., frt. ald. .... lb.	1.19	-
Copper nitrate (cupric), purif., flake, dms., t.l., works. .... lb.	.43¼	-
Copper oleate, solid, 6% Cu. dms., works frt alld. .... lb.	.97	-
Copper oxide, black (cupric), dms., 80,000-lb. lots, works. .... lb.	1.21	-
red (cuprous), dms., 97%, USN Type 1, (AA), 80,000-lb. lots, works. .... lb.	1.19	1.20
red, 90%, Type 2, same basis . . . lb.	1.15	-
Copper-8-quinolinolate, 10%, liq. emulsion, t.l., dlvd. .... lb.	2.52	-
Copper sulfate, cryst., pentahydrate, 98% bgs., c.l., f.o.b. works. .... 100 lbs.	46.45	-
CP, pentahydrate, cryst., dms., l.c.l., works. .... 100 lbs.	60.00	-
monohydrated, 35% Cu, dms., c.l., works. .... 100 lbs.	75.10	-
basic, bgs., c.l., works. . . . 100 lbs.	88.30	-
Coriander oil, USP, dms. .... lb.	32.00	34.00
Coriander seed Moroccan. .... lb.	.36	-
Rumanian .... lb.	.36	.37
Corn oil (See Oils, Fats & Waxes market report).		
Corn oil, crude, foots (soapstock), 95% acid; New York. .... lb.	.13½	.14
Corn oil acid, dms. .... lb.	.50	-
tanks. .... lb.	.32	.40
Corn syrup 43 Be., tanks, f.o.b. works. .... 100 lbs.	11.22	11.43
Cortisone acetate, USP, dms., 5 kilos or more .... gram.	.80	-
Cottonseed meal (See Oils, Fats & Waxes market report.)		
Cottonseed oil (See Oils, Fate & Waxes market report.)		
Cottonseed oil, acidulated (soap stock), acid, 95%, tanks, N.Y. .... lb.	.13	-
Cottonseed oil acids, dist., dms. .... lb.	.69	-
tanks .... lb.	.55	-
Coumarin, NF X, cryst., over 600-lb. lots. .... lb.	6.00	8.20
Cream of tartar (see Potassium bitartrate).		
Creosote, coaltar, grade 1, tanks, f.o.b. works .... gal.	1.15	1.19
soln., 80/20, tanks, same basis. gal.	1.134	1.17
p-Cresidine, fused, dms., works . . . lb.	4.31	-
m-Cresol, 95-98%, dms., t.l., f.o.b. . lb.	1.71	-
tanks, same basis .... lb.	1.65	-
m,p-Cresol, 99%, dms., t.l., f.o.b. . . lb.	.94	-
bulk, same basis .... lb.	.82	-
o-Cresol, 99% pure, dms., t.l., f.o.b. lb.	.87	-
bulk, same basis .... lb.	.75	-
98% pure, dms., t.l., f.o.b. .... lb.	.87	-
bulk, same basis .... lb.	.75	-
p-Cresol, 98%, dms., t.l., f.o.b. .... lb.	1.22	-
bulk, same basis .... lb.	.95	1.19
Cresylic acid, coaltar, dom., metapara content above 25%, resin and tricresyl phosphate grades, tanks, frt. alld. .... lb.	.58	-
Cresylic acid, dom., metapara content 25% or less, tanks, frt. alld. lb.	.59	-
Crotonic acid, 200-lb. dms., t.l., f.o.b. dlvd. .... lb.	1.50	-
Cryolite syn., bulk, c.l., works . . . . ton	910.00	950.00
Cube root, powd., 5% rotenone, basis, 50-lb. bgs., t.l., works . . . . lb.	.80	-
Cumene, bulk, contract, f.o.b. . . . . lb.	.15¼	.15¾
Cumin seed, Indian, bgs. .... lb.	.97	-
Iranian, bgs .... lb.	.97	-
Cyanuric acid, dms., c.l., t.l. frt. equald. .... lb.	1.18	1.37
Cyclamen aldehyde, 50% min. aldehyde content, dms. .... lb.	4.85	-
98.5%, dms. .... lb.	7.35	9.20
90-92%, dms. .... lb.	7.85	-
Cyclohexane, bulk, barges, wks . . gal.	1.08150	1.09150
Cyclohexanol tech., tanks, f.o.b. . . lb.	.52	.66½
Cyclohexanone tech., tanks, f.o.b. works. .... lb.	.55½	.58½
tanks, dlvd. .... lb.	.585	-
Cyclohexylamine, tech., tanks, works. .... lb.	85	-

D

2,4-D acid, tech., 50-lb. bgs., c.l., t.l., works, frt. equald. .... lb.	1.10	1.25
2,4-D butyl ester, tech., 55-gal. dms., c.l., t.l., works, frt. equald. . lb.	1.30	-
tanks, same basis. .... lb.	1.25	-
2,4-D dimethylamine salt, t.c., t.l. works, frt. alld. .... gal.	6.05	-
Decyl alcohol, mixed isomers, tanks, dlvd. .... lb.	.32	-
perfume grade, dms. .... lb.	.75	-
Defluorinated phosphate (tricalcium), feed grade, 18% P, c.l., bulk, f.o.b. works .... ton	195.00	226.00
Denatured alcohol, ethyl, C018, CD19, tanks, dlvd. E. .... gal.	1.87	-

NOTE: Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.

Denatured alcohol, ethyl,		
SD2B, tanks, dlvd. E. .... gal.	1.81	-
SD3A, tanks, dlvd. E. .... gal.	1.78½	-
SD23A, tanks, dlvd. E. .... gal.	1.88	-
SD23H, tanks, dlvd. E. .... gal.	1.89	-
SD29, tanks, dlvd. E. .... gal.	1.83	-
SD30, tanks, dlvd. E. .... gal.	1.72½	-
SD35A, tanks, dlvd. E. .... gal.	1.86½	-
Denatured alcohol, ethyl, brucine formula SD40, tanks, dlvd. E. .... gal.	1.83	-
ethyl, optional formula, SD40, tanks, dlvd. E. .... gal.	1.82½	-

For anhyd. alcohol on above formulae, prices are 12c. per gal. higher.

West Coast dlvd. prices are the same as Eastern prices, except in Idaho, Oregon and Washington where 5c. differential on tankcars is maintained.

Desoxyephedrine hydrochloride (See Methamphetamine hydrochloride)		
Detergent alkylate, straight chain dodecylbenzene, tanks, barges, f.o.b. .... lb.	.45	-
Dextrin, corn, canary dark, paper bgs., c.l., works. .... 100 lbs.	26.04	-
white, paper bgs., c.l., works. .... 100 lbs.	27.43	-
Dextrose, anhyd., coml., bgs., c.l., dlvd. New York. .... 100 lbs.	41.10	-
USP special, 100-lb. bgs., c.l., dlvd. New York. .... 100 lbs.	46.50	-
Dextrose, hydrated coml, bgs., c.l., dlvd. New York. .... 100 lbs.	24.25	-
Western zone .... 100 lbs.	25.60	-
Diacetone alcohol, acetone free, tanks, dlvd. .... lb.	.52	-
Diacetyl, flavor grade, dms. .... lb.	9.25	15.00
Diammonium phosphate, fert. grade. min. 18% N, 46% P, bulk, c.l., f.o.b. Fla. works. .... ton	140.00	145.00
Diammonium phosphate, feed grade, 18% N, 20% P, bulk, c.l., f.o.b. Fla. works. .... ton	240.00	-
bgs., same basis. .... ton	250.00	-
Diammonium phosphate, tech., bgs., c.l., t.l., works, frt. equald. .... 100 lbs.	52.60	-
food grade, bgs., c.l., t.l., same basis. .... 100 lbs.	57.75	-
2,4-Di-tert-amylphenol, min. 95.5%, dms., c.l., t.l., works. .... lb.	1.04	-
tanks, works .... lb.	.97	-
Diarylide yellow, OT. (yellow 14), dms., frt. alld. .... lb.	7.00	8.00
o-Dianisidine dihydrochloride, 100%, MW 244, dms., t.l., dlvd. . . lb.	4.25	-
2,6-Di-tert-Butyl-p-Cresol (see Butylated hydroxytoluene)		
Dibutyl fumarate, tanks, f.o.b. works. .... lb.	.77	.85
Dibutyl maleate tanks, f.o.b. works. lb.	.63	.64
Dibutyl phthalate tanks, works. .... lb.	.54	.60
Dibutyl sebacate tanks, works . . . . lb.	1.72	1.89
Dibutylamine, dms., c.l., dlvd. .... lb.	1.12	-
tanks, same basis. .... lb.	1.06	-
2-5-Dichloroaniline, flake, dms., works. .... lb.	2.00	-
fused, dms., works .... lb.	1.80	-
3,4-Dichloroaniline, tech. 96%, solid, dms., c.l., t.l., f.o.b. works . lb.	1.48	1.57
o-Dichlorobenzene, tech., 80%, dms., c.l., t.l., dlvd. .... lb.	.52	-
tanks, same basis. .... lb.	.45	-
98% refd., dms., c.l., same basis. . lb.	.54	-
tanks, same basis .... lb.	.47	-
p-Dichlorobenzene, graded, 300-lb. dms., t.l., f.o.b., frt. equald. lb.	.51	.52
tanks, liq., same basis .... lb.	.43	.47
2,6-Dichloro-4-nitroaniline, dms., 10,000 lbs. or more, works. lb.	3.30	-
Dichlorophenoxyacetic acid (see 2,4-D).		
Dicyclohexylamine, dms., c.l., t.l., f.o.b. .... lb.	1.86	-
tanks, same basis .... lb.	1.25	-
Dicyclohexyl phthalate, bgs., c.l., t.l., dlvd. .... lb.	1.26	-
Dicyclopentadiene, high-purity, 87-98%, tanks, works. .... lb.	.35	-
Diethanolamine, tanks, frt. ald. .... lb.	.34	.38
Diethanolamine lauryl sulfate, tanks, frt. alld. .... lb.	.41	-
DDVP (see Dimethyl dichlorovinyl phosphate).		
Diethyl barbituric acid (see Barbital).		
Diethyl carbonate, tankwagons, f.o.b. works .... lb.	1.40	-
Diethyl ethanolamine, CP dms., c.l., dlvd. .... lb.	1.16	-
tanks, dlvd. .... lb.	1.10	-
Diethyl ethanolamine tech., 8c. per lb. lower.		
Diethyl oxalate, dms., c.l., f.o.b. works. .... lb.	1.60	-
Diethyl phthalate, tanks, f.o.b. . . . lb.	.69	.98
odorless cosmetic grades, t.l., works. .... lb.	.97½	-
Diethyl sulfate, tanks., frt. alld. E. . . lb.	.59	-
Diethyl thiourea, dms., c.t., t.l., works. .... lb.	2.48	-
Di-2-ethylhexyl adipate (see Dioctyl adipate).		
Diethyl toluamide, 95-97% min. meta isomer, dms., t.l., f.o.b. works. .... lb.	2.75	-
N,N-Diethyl-m-toluidine, tech., liq., dms., c.l., f.o.b. .... lb.	3.16	-
tanks, same basis. .... lb.	3.10	-
Diethylamine, dms., c.l., dlvd. .... lb.	1.15	-
tanks, same basis. .... lb.	1.02	-
N,N-Diethylaniline, dms., c.l., t.l., f.o.b. works. .... lb.	1.83	-
tanks same basis. .... lb.	1.75	-
Diethylbenzene, tanks, f.o.b. works lb.	.98	-
Di-2-ethylhexyl azelate (see Dioctyl azelate).		
Di-2-ethylhexyl phthalate (see Dioctyl phthalate).		
Diethylene glycol, tanks, dlvd. E. . . lb.	.29½	.31½
Diethylene glycol monobutyl ether, dms., c.l., frt. alld. E. . . . lb.	.65	-
tanks, frt. alld E. .... lb.	.57	-
Diethylene glycol monoethyl ether, dms., c.l., frt. alld. E. .... lb.	.64	-
tanks, frt. alld. E. .... lb.	.58	-
Diethylene glycol monomethyl ether, dms., c.l., frt. alld. .... lb.	.62	-
tanks, frt. alld. .... lb.	.54	-
Diethylene glycol monobutyl ether acetate, dms., c.l., dlvd. E. . . lb.	.80	-
tanks, dlvd. E. .... lb.	.72	-
Diethylene glycol monoethyl ether acetate, dms., c.l., frt. alld. E. lb.	.80	-
tanks, frt. alld. .... lb.	.72	-
Diethylenetriamine, tanks, f.o.b. works. .... lb.	1.60	1.61
Diethylenetriamine pentaacetic acid, pentasodium salt solution, tank-cars/tanktrucks, frt-equalized .... lb.	.45	-
Digitoxin, USP, imp., bots. .... gram	2.60	3.00
Diglycol laurate, dms., ton lots. .... lb.	.32½	-
Diglycol stearate, dms., t.l. .... lb.	.62	.73
Dihydrazine sulfate, dms., works. .... lb.	1.10	1.25
Dihydrostreptomycin sulfate, bulk kilo.	48.00	-
Dihydroxyacetone, 50-kilo lots, works. .... kilo.	40.00	-
Di-isobutyl ketone, tanks, dlvd. .... lb.	.80	-
Di-isobutyl phthalate tanks, dlvd. E lb.	.55	.57
Di-isobutylene, tanks, f.o.b. Houston .... lb.	.37	-
Di-isodecyl phthalate, tanks, dlvd. . lb.	.40	.40½
Di-isononyl phthalate, tanks, dlvd. .... lb.	.40	-
Di-iso-octyl azelate, tanks, dlvd. E. . lb.	.99	1.07
Di-iso-octyl phthalate, tanks, dlvd. . lb.	.40	-
Di-isopropanolamine, dms., c.l., frt. alld. .... lb.	.66½	-
tanks, same basis .... lb.	.58½	-
Di-isopropylamine, dms., c.l. dlvd. . . lb.	1.17	-
tanks, same basis. .... lb.	1.07	-
Dilauryl 3,3-thiodipropionate, dms., t.l., frt. alld. .... lb.	1.89	-
Dill oil, USP, dms. .... lb.	7.00	8.25
Dimethyl anthranilate, dms. .... lb.	15.60	-
Dimethyl benzyl carbinyl acetate, 25-lb. dms. .... lb.	8.95	-
Dimethyl carbonate, dms, t.l., f.o.b. works. .... lb.	.90	-
Dimethyl dichlorovinyl phosphate, 55-gal. dms., f.o.b. .... lb.	1.80	1.90
Dimethyl ethanolamine, anhyd., dms., c.l., dlvd. E. .... lb.	1.15	1.18
tanks, dlvd. E. .... lb.	1.07	1.10
Dimethyl ether, aerosol grade, tanks, dlvd .... lb.	.38	-
Dimethyl phthalate, tanks, f.o.b works. .... lb.	.65	-
Dimethyl sebacate, tanks, f.o.b works. .... lb.	2.46	2.88
Dimethyl sulfate, ref. dms., c.l., f.o.b. works. .... lb.	.57	-
tanks. .... lb.	.46	-
Dimethyl sulfide, tanks, works .... lb.	.58	-
Dimethyl sulfoxide, tanks, works . . lb.	.78	-
Dimethylacetamide, bulk f.o.b. works. .... lb.	.87½	-
Dimethylamine, 25% soln., tanks, frt. equald., 100% basis. .... lb.	.63½	-
40% soln., tanks, frt. equald., 100% basis. .... lb.	.63½	-
anhyd., tanks, frt. equald. .... lb.	.54½	-
N,N-Dimethylaniline, t.l., f.o.b. .... lb.	1.03	-
t.l. dms. .... lb.	1.11	-
N,N-Dimethylformamide, dms., c.l., t.l., f.o.b., works. .... lb.	.57	-
tanks, same basis. .... lb.	.49	-
2,4-Dinitroaniline, tons-lots, f.o.b. .... lb.	1.22	-
Dinitroaniline, orange toner, CP, bgs., dlvd. E. of Rockies .... lb.	5.20	-
2,4-Dinitrochlorobenzene, crystalizing at 47°, t.l., f.o.b. Charlotte, N.C. .... lb.	.96	-
2,4-Dinitrophenol, 250-lb. dms., f.o.b. Charlotte, N.C. .... lb.	1.95	-
Dinitrotoluene, mix., tech. f.o.b. works .... lb.	.30	.43
2,4-Dinitrotoluene, dms., c.l., t.l., works. .... lb.	1.25	-
tanks, works .... lb.	1.20	-
Dioctyl adipate, tanks, frt. alld. E. . . lb.	.81	.70
Dioctyl azelate, tanks, dlvd. E. .... lb.	.99	1.04
Dioctyl phthalate, tanks, dlvd. .... lb.	.40	.45
Dioctyl sebacate, 99%, tanks, f.o.b. works. .... lb.	1.47	-
1,4-Dioxane, tanks, frt. alld. E. .... lb.	1.13	-
t.l., same basis. .... lb.	1.21	-
Dipentaerythritol, bgs., c.l., t.l., dlvd. E. .... lb.	1.42	-
Dipentene steam-dist., tanks, f.o.b. Fla. works .... lb.	.25	.39
sulfate turpentine derived, tanks .... lb.	.25	.29
Dip oil (see Tar acid oil).		
Diphenhydramine hydrochloride, USP, dom., 1,000-kilo lots, dms., dlvd. .... kilo.	20.00	24.00
Diphenyl, 98.8%, bgs., c.l., t.l., works. .... lb.	.74	-
tanks, works. .... lb.	.65	-
Diphenyl oxide, tech. grade, tanks lb.	1.11	1.20
Diphenylamine, refd., flake, bgs., t.l., works, frt. equald. .... lb.	1.25	-
molten, tanks, works. .... lb	1.00	-
octylated, flake, bgs., t.l. f.o.b. works. .... lb.	7.68	-
Diphenylguanidine, bgs., t.l., frt. alld. .... lb.	2.52	-
Diphenylhydantoin-sodium USP, dms. .... lb.	5.00	5.60
Diphenylmethane 4,4,-di-isocyanate, polymeric, bulk, c.l., min. frt. alld. .... lb.	.91	-
Dipropylene glycol, tanks, f.o.b. . . . lb.	.40½	.42½
Dipropylene glycol monomethyl ether, dms., c.l., dlvd. .... lb.	.54	-
tanks, same basis. .... lb.	.48	-
Di-o-tolylguanidine, powd., dms., t.l., frt. alld. .... lb.	2.92	-
Di-o-tolylthiourea, tech., solid, dms., t.l., frt. alld. .... lb.	3.11	-
Ditridecyl phthalate, tanks, dlvd . . . lb.	.64	.85
Diundecyl phthalate, tanks, dlvd. . . lb.	.81	.85
Divinylbenzene, 100% basis, tanks works. .... lb.	2.75	2.60
dms, 100% basis .... lb.	3.00	2.70
I-Dodecanol, syn., tanks, f.o.b. .... lb.	.76½	-
Dodecenyl succinic anhydride, dms., c.l., t.l., dlvd. .... lb.	.88	-
Dodecylbenzene (see Detergent Alkylate).		
Dodecylphenol, tanks, min. frt. alld. E. .... lb.	.48	.53
Dyes, coaltar, certified colors for food, drugs and cosmetics, 100 lb. and over. frt. prepaid or alld. .		
Blue, FD&C. No. 1 .... lb.	21.20	22.50
No. 2 .... lb.	29.16	29.22
Green, FD&C, No. 3 .... lb.	49.50	65.00
Red, FD&C, No. 3 .... lb.	24.00	24.50
Yellow, FD&C, No. 5 .... lb.	7.45	7.85
No. 6 .... lb.	8.45	8.75
Dyes, coaltar, certified colors for drugs and cosmetics. 100-lb. lots dlvd.		
Green, D&C, No. 5 .... lb.	38.50	-
No. 6 .... lb.	42.80	-
Red, D&C, No. 4 .... lb.	18.85	-
No. 17 .... lb.	36.90	-
No. 19 .... lb.	38.25	-
No. 22 .... lb.	12.45	-
No. 28 .... lb.	59.95	-
No. 33 .... lb.	48.95	-
Yellow, D&C No. 7 .... lb.	21.00	-
No. 8 .... lb.	20.55	-
No. 10 .... lb.	48.80	48.85
No. 11 .... lb.	35.25	-
Dyes, coaltar, for general use in cloth and paper dyeing (by Color Index Name), f.o.b. works		
A Blk 1 Blue black ex. conc. .... lb.	5.75	-
Dyes, A Bl 9 Blue 2G .... lb.	5.48	-
A Bl 45 Alizarine Blu SAP 150% . lb.	19.85	-
A Bl 90 Alizarine Br. Cy G .... lb.	14.13	-
A Bl 113 Navy 5R .... lb	8.55	-
A Gr 16 Dast 2G 333% .... lb.	22.12	-
A Or 7 11 .... lb.	3.72	-
A Or 8 RD Ex. Conc. .... lb.	4.00	-
A Or 10 Wool Or G .... lb.	4.30	-
A Or 74 Metalized Or DNA .... lb	0.15	-
AR 20 .... lb.	5.13	-
AR 14 Azo Rubine 133% .... lb.	8.85	-
AR 18 Scarlet 4R Conc. .... lb.	5.45	-
AR 88 Fast Red A. Conc. .... lb.	8.85	-
AR 151 Silk Red 3B Conc. .... lb.	4.50	-
AV 17 5BNS Conc. .... lb.	9.75	-
AV 49 4BNS Conc. .... lb.	12.22	-
A Y 17 Fast Light Yell 2G. .... lb.	5.69	-
A Y 23 Tartrazine Ex Conc. .... lb.	6.18	-
B Bl 9 Zinc Free .... lb.	16.40	-
B Br 4 Bismark Brown R Ex. Conc. lb.	4.42	-
B G 1 Jade Crystals .... lb.	9.55	-
B G 4 Malachite Green Crystal. . lb.	8.90	-
B V 1 Methyl Violet Crystals .... lb.	8.60	-
B V 10 Rhodamine B Ex. .... lb.	10.95	-
B Y 2 Bond Yell SFA 150% .... lb.	10.10	-
D Bl 1 Sky Blue 6B Conc. .... lb.	4.82	-
Ex. Conc. 300% .... lb.	9.25	-
D Bl 8 Azurine G Conc. .... lb.	9.46	-
D Blk 22 Fast Black DR .... lb.	2.85	-
Fast Black GR 150% .... lb.	4.26	-
D Br 230 Resin Fast Brown BRNB 200% .... lb.	7.23	-
D Or 26 Resin Fast Green GL .... lb.	9.15	-
D R 24 B Ex. Conc. .... lb.	7.98	-
D R 31 Brilliant-Red 12B Conc. . lb.	6.18	-
D R 80 Fast Red 8BLN .... lb.	8.16	-
D R 81 Paper Red 8BLP .... lb.	6.85	-
D R 251 Fast Scarlet AV .... lb.	8.26	-
D Or 102 Fast Orange WSP Liq. . lb.	2.47	-
WS. Conc. 150% .... lb.	11.26	-
D Y 4 Brilliant Paper Yell 3GX 125% .... lb.	4.69	-
Brilliant Paper Yell 3DX Liq. .... lb.	1.75	-
D Y 11 Stilbene Yellow GA. Ex. Conc. .... lb.	3.03	-
D Y 41 Fast Yellow RGL Conc. 200% .... lb.	8.75	-
D Y 27 Resin Fast Yellow L5G. . . lb.	14.40	-
Dis R 1 Scarlet BA .... lb.	4.29	-
Dis R 91 Pink REL 200% .... lb.	21.00	-
Dis Y 3 Yellow G .... lb.	3.65	-
Dis Y 54 Yellow 3G .... lb.	6.84	-
Dis Or 3 Orange GRA .... lb.	4.91	-
Dis Or 37 Orange OB .... lb.	3.77	-
Dis V 1 4RN Paste .... lb.	7.85	-
Dis V 26 Bordeaux BV 200% .... lb.	17.25	-
Dis B 127 Blue BGLF .... lb.	10.05	-
Dis Bl 102 Blue GFDA 300% .... lb.	22.90	-
50% Paste .... lb.	4.10	-
V D 1 Jade Green Double Paste . lb.	5.50	-
V Blk 25 Olive TA Paste .... lb.	9.85	-

E

Endrin, tech., 95-98%, dms., t.l. . . . lb.	7.00	-
Ephedrine, syn. anhyd., USP, 80-oz. lots. .... oz.	1.25	-
Ephedrine hydrochloride, NF, cryst., less than 1,000 kg. .... kilo	36.25	40.25
Ephedrine sulfate, USP, cryst., dms., less than 1,000 kilos .... kilo	43.00	45.25
Epichlorohydrin, tanks, dlvd. .... lb.	.86	-
Epinephrine base, syn., USP, bots., 100-gram lots .... gram	.80	-
Epoxy resin, liquid, bulk tanks, dlvd. . . lb.	1.31	1.41
Solid, bgs., t.l. .... lb.	1.26½	1.33½
Epsom salt (see Magnesium sulfate).		
Erythorbic acid, powd., gran., 100 lb. dms., t.l. or mixed t.l. f.o.b. works. .... lb.	4.10	4.25
Ester gum, gum-rosin type, dms., c.l., dlvd., Ill., Md., Ky., E. States, Minneapolis, N.C., Ohio, St. Louis, St. Paul, Va., W. Va. lb.	.75	-
Ester gum, wood-rosin type, dms., c.l., same basis. .... lb.	.43	.48
Ethyl acetate, syn., 85-88%, tanks, dlvd. .... lb.	.41	.41½
99%, tanks, dlvd. .... lb.	.41½	.42½
Ethyl acetoacetate dms., c.l., dlvd. . lb.	1.13	-
tanks, dlvd. .... lb.	1.05	-
Ethyl acrylate, tanks, frt alld. .... lb.	.88	-
Ethyl alcohol, syn., 190 pf., USP tax free, tanks, dlvd. E. .... gal.	1.55	-

Ethyl alcohol, absolute, 200 pf., tax free prices 12c. higher than 190 pf., tax free.

Ethyl alcohol, fermentation, tanks, f.o.b. works .... gal.	1.06	1.28

Price range attributable to various state tax incentives.

Ethyl alcohol, denat. (see Denatured alcohol, ethyl).		
Ethyl p-aminobenzoate, NF (see Benzocaine).		
Ethyl benzoate, dms. .... lb.	1.35	1.50
Ethyl bromide, tech., 98%, dms., c.l., frt. alld. E. .... lb.	.76	-
Ethyl butyrate, dms. .... lb.	1.35	1.60
Ethyl cellulose, standard vis., 7 cps. bgs., t.l., frt. equald. E. . . . lb.	4.55	-
standard vis., 10, 20, 45, 100 cps., t.l., frt. equald. E. .... lb.	4.17	4.22
medium vis., 50, 70, 100 cps., t.l., frt. equald. E. .... lb.	4.25	-
USP vis., 7 cps bgs., t.l., frt. equald. E .... lb.	4.88	-
USP 10, 20, 45, 100 bgs., t.l., frt. equald. E .... lb.	4.59	4.89
VSP (medium) 50, 70, 100 bgs., t.l., Frt. equald. E. .... lb.	4.51	-
Ethyl chloride, tech., cyls., frt. alld. . lb.	.26	.28½
tanks, frt. alld. .... lb.	.24	.26½
Ethyl cinnamate, dms. .... kilo	41.00	-
Ethyl ethanolamines, mixed, dms., t.l., dlvd. E. .... lb.	1.23	-
tanks, dlvd. E. .... lb.	1.15	-
Ethyl ether, refined, tanks, f.o.b. . . . lb.	.46	-
Ethyl hexanoate, dms. .... lb.	4.25	4.75
2-Ethylhexoic acid, dms., c.l., t.l., dlvd. E. .... lb.	.83	-
tanks dlvd. E. .... lb.	.57	-
2-Ethylhexyl acrylate, straight or mixed, tanks, frt. alld E. . . lb.	.79.5	-
2-Ethylhexyl alcohol, tanks, dlvd. . . lb.	.35	-
Ethyl iodide, cbys., works .... lb.	6.25	-
Ethyl linalool, syn. 55-gal. dms. .... lb.	10.80	-
Ethyl linalyl acetate, syn., 55-gal. dms. .... lb.	10.85	-
Ethyl methacrylate, tanks, frt. equald. .... lb.	1.06	-
n-Ethyl morpholine, dms., t.l., frt. alld. .... lb.	2.00-	-
tanks, same basis. .... lb.	1.92	-
n-Ethyl-a-naphthylamine, dms., works .... lb.	1.04	-
Ethyl oxalate (see Diethyl oxalate).		
Ethyl parathion (see Parathion, ethyl).		
Ethyl silicate dist. (see Tetraethyl orthosilicate).		
Ethyl silicate, 40% available SiO2, dms., t.l., f.o.b. works. . . . lb.	1.45	1.46
tanks, f.o.b. works. .... lb.	1.39	-
N-Ethyl-m-toluidine, tech., liq., dms., c.l., f.o.b. .... lb.	3.18	-
tanks, same basis. .... lb.	3.10	-
N-Ethyl-o-toluidine, dms. .... lb.	2.85	2.90
Ethyl vanillin 100 lb. dms., 500 lbs. or more .... lb.	13.60	-
25 lb. dms., 500 lbs. or more . . . . lb.	13.75	-
100 lb. dms., less than 500 lbs. . . lb.	14.00	14.50
Ethylamine (see Mono-Di- and Tri-)		
N-Ethylaniline, dms., c.l., t.l., f.o.b. works. .... lb.	1.66	-
tanks, same basis .... lb.	1.58	-
Ethylbenzene, bulk, f.o.b. Houston, Tex. .... lb.	.22	.23
Ethylene, contract, dlvd. .... lb.	.16	.18½
Ethylene brassylate, dms. .... lb.	18.00	18.25
Ethylenediamine, 99%, tanks, f.o.b. works. .... lb.	1.30	1.305
Ethylenediamine dihydriodide .... lb.	7.55	9.25
Ethylenediamine tetraacetic acid, tetrasodium salt, soln., t.c., t.t., frt. equald. .... lb.	.36½	-
Ethylene dibromide dms., c.l., frt. equald. .... lb.	.38	.46
tanks, frt. equald. .... lb.	.32	.42
Ethylene dichloride, tanks, f.o.b. works. .... lb.	.17	.17¼
Ethylene glycol, indust., tanks, frt. alld. .... lb.	.31	-
Ethylene glycol, monobutyl ether, tanks, dlvd E. .... lb.	.41½	-
Ethylene glycol monoethyl ether, tanks, dlvd. E. .... lb.	.51	-
Ethylene glycol monomethyl ether, tanks, dlvd. E. .... lb.	.34	-
Ethylene glycol monobutyl ether acetate, tanks, frt. alld. E. . . . lb.	.64½	-
Ethylene glycol monoethyl ether acetate, tanks, frt. alld., E. . . lb.	.55½	-
Ethylene glycol monomethyl ether acetate, tanks, frt. alld. E. . . . lb.	.43	-
Ethylene oxide, tanks f.o.b. .... lb.	.85	.45
Ethylene trichloride (see Trichloroethylene).		
Eucalyptol, NF, dms. Portuguese . kilo.	7.50	-
Eucalyptus citriodora, Chinese . . . kilo	3.66	-
Eugenol, USP, dms. .... kilo	7.65	-

F

Fennel oil, sweet, USP, cns. .... lb.	9.00	-
Fennel seed, Egypt .... lb.	.69	.68
Indian .... lb.	.87	.85
Fenugreek seed, Indian, bgs. .... lb.	.25	.32
Ferric chloride anhyd., tech., 350-lb. dms., c.l., works. . . . 100 lbs.	36.00	-
Ferric chloride, 42 Be., photo grade dms., c.l., works . . . 100 lbs.	9.10	-
Ferric chloride, sewage grade, 100 percent basis, f.o.b. works, tank works. .... ton	176.00	265.00
Ferric nitrate, cryst., dms., t.l., f.o.b. lb.	.64	-
Ferric oxalate, tech., gran., 50-lb. dm., f.o.b. works. .... lb.	1.85	-
Ferric oxides (see Iron Oxides).		
Ferric phosphate, FCC insoluble powder, dms, 10,000 lbs. .... lb.	1.10	1.15
Ferric pyrophosphate, soluble, purif., pearls, 50-lb. dm. .... lb.	1.11	-
Ferric resinate, precip., 6.75% Fe. dms., ton lots frt. alld. . . . . lb.	.45	-
Ferric sulfate, partly hydrated, 100-lb. bgs., c.l., works. .... ton	141.00	-
bulk, works. .... ton	117.00	-
Ferric ammonium citrate, NF, brown, green gran. 100 lb. dms., 2,000 lb. min., f.o.b. shipping pt. .... lb.	2.00	2.95

2c. per pound surcharge for shipments W. of Denver

Ferric-ammonium oxalate, fine gran., 250-lb. dms., t.l., f.o.b. works. E. .... lb.	.42	-
Ferric hydroxyethylene diaminetriacetic acid, industrial grade, sodium salt, soln., 4.5% Fe, t.c., t.t., f.o.b. works . . . . . lb.	.55	-
agricultural grade, sodium salt solution, 5% Fe, t.c., t. t., f.o.b. works. .... lb.	.84	-
Ferrous fluoborate liq. conc., dms., t.l., works, frt. equald. .... lb.	.64	-
Ferrous gluconate, NF, t.l., works E. lb.	2.25	-
Ferrous naphthenate, liq., 6%, Fe. dms., dlvd. .... lb.	1.17	-
Ferrous sulfate, moist, bulk, t.l. f.o.b. works. .... ton	30.00	-
heptahydrate, gran., bulk, t.l. f.o.b. works. .... ton	145.00	150.00
monohydrate, gran., bulk., t.l., f.o.b. works. .... ton	170.00	160.00
USP, powd., 400-lb. dms. .... lb.	.49	-
cryst., 250-lb. dms. .... lb.	.51	-
Fir oil, Canada dms. .... lb.	10.00	-
Siberia, dms .... lb.	12.75	-
Fish oil, refd., alkali, tanks, c.l. .... lb.	.29	-
kettle-bodied, tanks. .... lb.	.32	.36
light, cold-pressed, dms., c.l. .... lb.	.34	-
tanks .... lb.	.26	-
Fishmeal, dom., menhaden, 60% protein grd., bulk, f.o.b. Atlantic port. .... ton	295.00	-
f.o.b. Gulf port .... ton	290.00	-
Imp., Chilean, 65% protein min., bulk, c.l., t.l., ex whse. f.o.b. Atlantic and Gulf ports. . . . ton.	285.00	-
Fluoboric acid, dms., t.l., works, frt. equald. .... lb	.70	-
Fluorocarbon, No. 11 bulk, tanks, dlvd. .... lb.	.57	.64
No. 12, bulk, same basis .... lb.	.58	.74
No. 22, bulk, same basis .... lb.	1.05	1.14
No. 113, bulk, same basis .... lb	.89	.93½
No. 114, bulk, same basis .... lb	1.02	1.08
Fluosilicic acid (see Hydrofluosilicic acid)		
Formaldehyde, 37% methanol free (uninhibited) dlvd., gull . . . lb.	.088	.0905
44-45% (1% methanol) tanks, dlvd. .... lb	.1015	.1065
37% (inhibited 7% methanol, dlvd. .... lb.	.0945	.1025
37% (inhibited 11-15% methanol) tanks, dlvd. .... lb.	.1055	.1080
Formamide, tanks, f.o.b. .... lb.	.39	-
dms., same basis .... lb.	.44	-
Formic acid 90% tanks, f.o.b. works. .... lb.	.36½	-
95% dms., c.l., works. .... lb.	.51½	-
Fructose, cryst., 18,000 kilos or more, dms. .... lb.	.90	1.03
Fumaric acid, food grade, bgs t.l., frt. equald. E. .... lb.	.75½	.77½
tech. grade, bgs., t.l., f.o.b. frt. equald. .... lb.		.82½
Furfural, tanks, f.o.b. Cedar Rapids, Iowa, and Belle Glade, Fla. lb.	.75	-
Furfuryl alcohol, tanks, f.o.b. Memphis, Tenn. and Omaha, Neb. . . lb.	.72	-

G

D salt, dms., frt. alld. 100% basis . . lb.	2.30	-
Gallic acid, 400-kilo lots .... kilo	23.05	-
Garlic oil, dms., Egyptian .... kilo	100.00	110.00
Gelatin, edible, 100 AOAC test, dms., t.l., dlvd. .... lb.	1.80	1.75
125 AOAC test, dms., t.l. .... lb.	1.75	1.85
150 AOAC test, dms., t.l. .... lb.	1.85	1.95
175 AOAC test, dms., t.l. .... lb.	1.95	2.05
200 AOAC test, dms., t.l. .... lb.	2.05	2.15
225 AOAC test, dms., t.l. .... lb.	2.10	2.25
250 AOAC test, dms., t.l. .... lb.	2.20	2.35
275 AOAC test, dms., t.l. .... lb.	2.30	2.45
300 AOAC test, dms., t.l. .... lb.	2.50	2.65
Gentian violet (see Methyl rosaniline chloride).		
Geraniol, syn., 90-92%, dms. .... lb.	5.25	-
nat., 90-92%, dms. .... lb.	3.50	-
syn. 96-98%, dms. .... lb.	5.75	-
Geranium oil, Moroccan .... lb.	48.00	-
Bourbon .... lb.	55.00	-
Chinese .... lb.	23.00	-
Egypt .... lb.	22.75	-
Turkish (see Palmarosa oil).		
Geranyl acetate, dms. .... lb.	5.44	6.00
nat., dms. .... lb.	10.95	-
Geranyl formate, syn., dms. .... lb.	8.60	-
nat., dms. .... lb.	15.98	-
Gilsonite, s.p., bulk, c.l., f.o.b. Bonanza, Utah .... ton	160.00	-
selects, same basis .... ton	180.00	-
Ginger, Cochin, bgs. .... lb.	.63	.65
Chinese .... lb.	.56	.58
Ginger oil, Chinese .... kilo	34.00	41.00
Indian .... kilo	85.00	-
Ginger oleoresin, NF, bots. .... lb.	30.00	-
Glauber's salt (see Sodium sulfate).		
Gluconic acid tech. 50% dms., c.l., t.l., f.o.b. works. .... lb.	.50	-
tanks, same basis .... lb.	.44	-

CHEMICAL PRICES

WEEK ENDING DEC. 26, 1986

Glue, bone, extracted, green, jelly-grams, bgs., c.l. .... lb.	-	-
85 jellygrams, bgs., c.l., f.o.b. . . lb.	.86	-
115 jellygrams, bgs., c.l., f.o.b. . . lb.	.79	-
135 jellygrams, bgs., c.l., f.o.b. . . lb.	.77	-
164 jellygrams, bgs., c.l., f.o.b. . . lb.	.79	-
192 jellygrams, bgs., c.l., f.o.b. . . lb.	.87	-
220 jellygrams, bgs. c.l. f.o.b. . . . lb.	.93	-
Glue, hide.		
108 jellygrams, bgs., t.l., f.o.b. . . . lb.	.80	-
135 jellygrams, bgs., t.l., f.o.b. . . . lb.	.85	-
164 jellygrams, bgs., t.l., f.o.b. . . . lb.	.90	-
192 jellygrams, bgs., t.l., f.o.b. . . . lb.	.95	-
222 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.00	-
251 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.05	-
283 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.10	-
315 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.15	-
347 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.20	-
379 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.25	-
411 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.30	-
444 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.35	-
477 jellygrams, bgs., t.l., f.o.b. . . . lb.	1.40	-
Glutamic acid, 98½% dms., 100-lb. lots, frt. alld. .... kilo	6.55	-
Glycerine, nat., refd., USP, CP 99½% tanks, dlvd. .... lb.	.89½	-
USP, CP, nat. 96%, tanks, dlvd. . lb.	.87¼	-
Syn. 96%, tanks dlvd .... lb.	.89¼	-
Syn 99.5%, tanks dlvd .... lb	.91	-
Glycine (see Aminoacetic acid)		
Glyceryl guaiacolate. 100-lb fib dms. f.o.b. .... kilo	14.50	-
Glycolic acid (see Hydroxyacetic acid)		
Glyoxal 40% soln., bulk, tanks, dlvd .... lb.	.44½	-
Grapefruit oil, Fla., dms. .... lb.	3.00	-
Calif., dms. .... lb.	3.00	-
Israeli .... lb	3.00	-
Graphite, amorph, powd., bgs., dms., ex whse .... lb	15	40
cryst., 88-90%, powd., bgs., dms., ex whse .... lb.	.30	.60
Graphite, cryst., 90-92%, powd., bgs., dms., ex whse. .... lb	40	.75
95-96% powd., bgs., dms., ex whse. .... lb	50	.90
Graphite, amorph., cryst., 97% and up, powd., bgs., dms., ex whse. .... lb	80	1.20
Graphite, flake, No. 1 90-95%, bgs., dms., ex whse .... lb	65	75
No. 2, 90-95%, bgs., dms., ex whse .... lb	65	75
Drease (See Oils, Fats & Waxes market report)		
Grease oil (See Lard oil)		
Duaiacol, tech., 500-lb dms., 24,000 lb min., f.o.b. Wallingford, Conn .... lb	2.70	-
Duaiacwood oil, dms .... lb	3.75	-
Guar gum, edible, bgs., c.l., f.o.b. ship't. pt .... lb.	50	75
indust., bgs., high viscosity, c.l., same basis. .... lb	.50	.85

H

Heliotropin, dms. .... lb.	8.00	9.25
Hemlock oil (see Spruce oil).		
Henbane leaves, bls. .... lb.	.55	-
Heptane, indust., tanks, f.o.b. Beaumont, Tex. .... gal.	1.07	-
95%, tanks, f.o.b. Houston, Tex. .... gal.	1.18	-
Heptanoic acid, syn., tanks, f.o.b.	.65	-
I-Hexadecanol, syn., tanks, f.o.b. . . lb.	.43½	-
Hexahydrophthalic anhydride, tech. dms., t.l., f.o.b. works . . . lb.	1.42	-
Hexamethylenetetramine, gran. bgs., c.l., t.l., works .... lb.	.55	-
gran. dms., c.l., t.l., works . . lb.	.59	-
pdr. bgs., c.l., t.l., works . . . . lb.	.60	-
powd. dms, c.l., t.l., works . . lb	.63	-
Hexane, indust., tanks, works. .... gal.	1.01	1.15
95%, tanks, f.o.b. Houston, Tex. .... gal.	1.12	-
I-Hexanol, syn., tanks, f.o.b. .... lb.	.50	-
Hexyl alcohol, mixed isomers, tanks. .... lb.	.32	-
p-Hexyl methacrylate, dms., c.l., works. .... lb.	.75½	-
Hexylene glycol, tanks, dlvd. .... lb.	.50	-
Hexylresorcinol, USP, dms., 25-lb. lots or more, frt. alld. .... lb.	30.00	-
Homatropine hydrobromide, USP, 10-100-oz. lots, bots. .... oz.	10.25	11.30
Homatropine methylbromide, USP, 10-250 oz. lots, bots. .... oz.	9.70	10.70
Horehound herb, bls. .... lb.	.25	.28
Hydrazine hydrate, 85%, t.l., frt. alld. .... lb.	1.54	-
55-gal. dms., t.l., frt. alld. .... lb.	1.61	-
Hydriodic acid, purif., 47%-57%, 2-cbys., f.o.b. works. .... lb.	7.50	-
Hydroabietyl alcohol, tech., solid. dms., c.l., f.o.b. zone 1 .... lb.	.65	-
tanks, f.o.b. zone 1 .... lb.	.60	-
Hydrobromic acid, 48% dms., c.l, t.l., f.o.b. .... lb.	.38½	-
Hydrochloric acid, anhyd. (see Hydrogen chloride).		

CHEMICAL PRICES

WEEK ENDING DEC. 26, 1986

Hydrochloric acid, 20° Be, tanks, works, East .... ton	55.00	85.00
Midwest .... ton	50.00	70.00
Gulf Coast .... ton	57.00	–
West Coast .... ton	90.00	105.00
22° acid, same basis, East ..... ton	68.00	76.00
Midwest .... ton	66.00	70.00
Gulf Coast .... ton	63.50	–
West Coast .... ton	100.00	116.00
NOTE: Prices vary and are either freight collect freight equalized depending on producer and location.		
Hydrocortisone acetate, micronized, dms., 25 kilos or more . gram.	.70	–
Hydrocortisone, alcohol, micronized, dms., 25 kilos or more . gram.	.70	–
Hydrofluoric acid, anhyd. (see Hydrogen fluoride)		
Hydrofluoric acid, aqueous, 70% tanks., f.o.b. frt. equald. .... 100lbs.	43.00	–
Hydrofluosilicic acid, 15-gal. dms., t.l., works, 30% basis .... ton	–	–
tanks, 100% basis, works ..... ton	190.00	210.00
Hydrogen bromide, anhyd. cyls., extra, 30,000-lbs., f.o.b. works . lb.	7.00	–
Hydrogen chloride, anhyd., 50-lb. cyls., c.l., works .... lb.	.65	–
600-lb. cyls., c.l., same basis . lb.	.62	–
Hydrogen chloride, anhyd., tube trailers, seller's trailer, min. 100,000 lbs. a year ...... lb.	.37	–
tube trailers, buyer's trailer ..... lb.	.27	–
Hydrogen chloride anhyd., tanks, works .... ton	270.00	–
Hydrogen cyanide, liq., 99.5%, tanks, works .... lb.	.50	–
Hydrogen fluoride, anhyd., tank cars c.l., f.o.b., frt. equald. ..... lb.	.6875	–
Hydrogen peroxide, 35% tech., tanks, works, ft. equald. .... lb.	.2325	–
50% tankcars, frt. equald. .... lb.	.3225	–
70%, tankcars frt. equald. .... lb.	.45	–
Hydrogen sulfide, liq., 99.25% min. seller's tanks, works ..... lb.	.12	.13
170 lb. cylinders .... lb.	2.27	–
Hydroquinone, photo grade, consumers. c.l., l.l., divd. .... lb.	2.54	–
tech., dms. c.l., divd. .... lb.	1.95	–
Hydroxyacetic acid, tech., 70%, tanks, Belle, W. Va. .... lb.	.49½	–
Hydroxylammonium sulfate, dms., t.l., f.o.b. .... lb.	.63	–
p-Hydroxybenzene sulfonic acid (see p-Phenolsulfonic acid).		
Hydroxybutyl methylcellulose (visc. 12,000 cps.) 50 lb. bags, t.l., cl. 30,000 lb. min., divd., zone 1 .... lb.	2.10	–
Hydroxycitronellal dimethyl acetal, dms. .... lb.	16.55	–
p-Hydroxydiphenylamine, dms., t.l., f.o.b. works .... lb.	4.10	–
Hydroxycitronellal,		
natural, dms. .... lb.	9.40	–
pure, dms. .... lb.	13.60	–
extra grade, dms. .... lb.	14.60	–
syn., dms. .... lb.	9.50	–
Hydroxyethyl cellulose, t.l., divd. ... lb.	2.07	2.12
Hydroxyethyl methylcellulose (visc. 5,000 through 45,000 cps.) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.73	–
Hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.87	–
Hydroxypropyl methylcellulose, U.S.P (visc. 50 through 100 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.99	–
Hydroxypropyl methylcellulose (visc. 4,000 through 15,000 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.17	–
Hydroxypropyl methylcellulose (visc. 50 through 100 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 .... lb.	2.64	–
8-Hydroxyquinoline (see Oxyquinoline)		
Hypophosphorous acid, puril., 50% dms., c.l., works .... lb.	8.15	–

I

Ichthammol, NF, 200-kilo dms. .... lb.	4.25	4.50
Iminodiacetic acid, 98% min., dms., c.l., t.l., works .... lb.	3.00	–
Indole, dms. .... lb.	25.60	–
Inositol, 50-kilo dms., 1000 kilos or more, f.o.b. works ...... kilo	17.50	22.00
Iodine, crude, dms. .... kilo	13.50	16.00
Iodine USP .... lb.	14.21	14.59
Iodochlorhydroxyquin, USP, XVI 50-kilo dms., 100-499 kilos, frt. alld. .... kilo.	35.00	45.00
Iodoform, NF, dms., 300-lbs., f.o.b. works .... lb.	24.00	–
a-Ionone, dms. .... lb.	18.20	–
b-Ionone, dms. .... lb.	13.10	–
Ipecac root, whole, bgs. .... lb.	25.00	–
Irish moss, bleached, prime, whole .... lbs.	.55	.60
Iron blue, alkali-resistant, bgs., f.o.l., ton lots, dv. E. .... lb.	2.70	–
Iron blue, reg., bgs., f.o.l., ton lots, same basis .... lb.	2.00	2.15
Iron, puril., powd., pails, 10-100-lb. lots .... lb.	1.00	–
Iron oxide, black, syn., bgs., c.l., frt. equald. .... lb.	.66½	.75½
Iron oxide, brown, syn., bgs., c.l., frt. equald. .... lb.	.68	.78½
Iron oxide, metallic brown, t.c.l., bgs., frt. equald. .... lb.	.13	.15
Iron oxide, nat., red., dom., pure, bgs., c.l., works .... lb.	.275	.40
Iron oxide, yellow, ... lb.	.18	–
syn., bgs., c.l., frt. equald. .. lb.	.63	.71
Iron oxide, buff, nat., dom. bgs., c.l., t.l., works, light .... lb.	.75	.60
dark .... lb.	.60	–
other shades, bgs., c.l., frt. equald. .... lb.	.50	.55
Isatoic anhydride, bgs., f.o.b. works lb.	1.40	–
Isoamyl alcohol, 95% tanks, frt. alld. .... lb.	1.44	1.48
Isoborneol, 100 lb. dms. .... lb.	7.25	–
Isobornyl acetate, dms. .... lb.	.80	1.15
Isobutyl acetate, solvent grade, tanks, frt. alld. .... lb.	.45	.46
Isobutyl acrylate, tanks, frt. alld. E. . lb.	.71	–
Isobutyl alcohol, tanks, divd. ...... lb.	.26	–
Isobutylene, 60%, tanks, f.o.b. works .... lb.	.32	–
Isobutyl isobutyrate, tanks, f.o.b. works .... lb.	.42½	–
Isobutyl methacrylate, tanks, divd. . lb.	.87	–
Isobutyl phenylacetate, dms. ..... lb.	3.10	3.50
Isobutyl salicylate, dms. .... lb.	3.45	–
Isobutyraldehyde, tech., dms., c.l., divd. .... lb.	.43	–
tanks, divd. .... lb.	.35	–
Isobutyric acid, dms., c.l., t.l., divd. . lb.	No Prices	
tanks, same basis .... lb.	.76	
Isobutyronitrile, dms., c.l., f.o.b. works frt. collect .... lb.	.84	–
tanks, same basis .... lb.	.75	–
Isoeugenol, dms. .... lb.	5.20	5.60
Isoniazid, powd. .... kilo	12.00	–
Isonicotinic acid, hydrazine (see Isoniazid).		
Isononyl alcohol, dms., t.l. ...... lb.	.48	–
Iso-octyl alcohol, tanks, divd. ..... lb.	.44	–
Isophorone, tanks divd. .... lb.	.61	–
Isophthalic acid, 99%, bulk, f.o.b. Joliet, Ill., min. frt. alld. ..... lb.	.46	–
Isophthalonitrile, bgs., t.l., works ... lb.	2.65	–
Isopropyl acetate, tanks, divd. .... lb.	.47	–
Isopropyl alcohol, anhyd., 99%, tanks, divd. .... gal.	1.68	–
refd., 95%, tanks, divd. ...... gal.	1.61	–
refd., 61%, tanks, divd. ...... gal.	1.25	–
Isopropyl ether, tanks, divd. ...... lb.	.44	–
crude, tanks, divd. .... lb.	.37	–
Isopropylamine. (see Mono-, Di- or Tri-).		
Isopropyl myristate, dms., t.l., E. ... lb.	1.19	1.50
Itaconic acid, refd. bgs t.l. .... lb.	1.45	1.48

J

J acid, paste, dms., works, 100% basis .... kilo	4.75	–
Japan wax, cs. .... lb.	5.50	5.60
Jojoba oil, 55-gal. dms., f.o.b. Arizona producing point .... gal.	30.00	40.00
Juniperberry oil, Italian .... kilo	115.00	–

K

Kaolin, water washed, fully calcined, bags c.l., f.o.b. Georgia .. ton	255.00	–
NF pwd., colloidal, bacteria controlled, 50 lb. bags., 5,000 lb. lots .... lb.	.24	–
Kaolin, uncalcined. No. 1 coating, bulk, c.l., f.o.b., Georgia ...... ton	94.00	–
No. 2 coating .... ton	75.00	–
No. 3 coating .... ton	73.00	–
No. 4 coating .... ton	70.00	–
filler, gen.l purpose, same basis .... ton	58.00	–
delaminated water washed, uncalcined paint grade 1 micron avg., same basis .... ton	182.00	–
dry-grd. airfloated soft, same basis .... ton	60.00	–
Karaya gum, No. 1, powd., bbls. ... lb.	2.25	–
No. 2, powd., bbls. .... lb.	1.96	–
Kola nuts, bgs. .... lb.	.52	.57

L

Lacquer diluent petroleum, 140F.-200F. b.r., t.c., New Jersey and New York .... gal.	1.25	–
Houston, Texas .... gal.	1.29	–
Lacquer diluent, petroleum 200F.-240F. b.r., tankcars, New York and New Jersey .... gal.	1.20	1.25
Houston, Tex. .... gal.	1.12	–
Lactic acid, food grade 88%, t.c., f.o.b. works .... lb.	1.06	–
50%, t.c., frt. equald. .... lb.	.62	–
tech., 68%, t.c., frt. equald. ... lb.	1.03	–
Lactose, edible, reg. bgs., c.l., works .... lb.	.22	.28
Lactose, USP, reg. dms., c.l., t.l., frt. equald. .... lb.	.55	.69
Lactose, USP, spray dried, bgs., t.l., frt. equald. .... lb.	.60	–
Lake C, red toner. (red 53) bbls., frt. alld. .... lb.	5.70	–
Lanolin, anhyd., cosmetic. 400-lb. dms., works .... lb.	1.18	1.25
pharmaceutical, 400-lb. dms. works .... lb.	1.15	–
tech., (under 2% f.f.a.), 400-lb. dms., works .... lb.	1.08	1.13
Lard (See Oils, Fats & Waxes market report.)		
Lard oil, No. 1, dms., c.l., f.o.b. .... lb.	.34	–
tanks, same basis .... lb.	.28	–
Lard oil, extra, winter-strained, dms., c.l. .... lb.	.41	–
tanks, same basis .... lb.	.33	–
prime, burning, dms., c.l., same basis, Chicago .... lb.	.43	–
prime, burning, tanks, same basis .... lb.	.35	–
NOTE: 300 Mi. rad. 1¼c. higher, except Texas, 2c., and West Coast, 3c. higher.		
Laurel leaves, Turkish .... lb.	3.00	3.25
Laurent's acid, drums, f.o.b. ...... lb.	3.85	–
Lauric acid, coml., pure bgs., c.l. .... lb.	.85	.71
Louric aldehyde (aldehyde C-12), dms. .... lb.	7.75	–
n-Lauryl methacrylate, dms., c.l., t.l., works .... lb.	1.72	–
Lavandin oil, Abrialis, 30-32%, dms. lb.	6.50	–
Lavender flowers, ord. .... lb.	.65	.75
medium, bls. .... lb.	.80	.90
select. bls. .... lb.	1.10	1.16
Lavender flower oil, NF, French, 40-42%, ester, cns. .... lb.	9.00	18.00
spike, Spanish, dms. .... kilo	13.00	14.00
Lead acetate, puril., flake, 400-lb. dms., works .... lb.	.48	–
tech., flake, f.l., 400lb. dms., works .... lb.	.37	–
Lead blue, basic, sulfate, bbls., c.l., ship.t. pt., f.o.b. .... lb.	.87	–
Lead carbonate. (see Lead white basic carbonate).		
Lead chloride, 400-lb. dms., works. lb.	3.25	–
Lead dioxide, tech., powd., 200-lb. dms., t.l., works .... lb.	.68	.70
Lead fluoborate, liq. conc., dms., t.l., works, frt. equald. .... lb.	.85	–
Lead metal, divd. .... lb.	.28	–
Lead monosilicate, milled, bgs., c.l., f.o.b. works .... lb.	.36½	–
coarse, bgs., c.l., same basis .... lb.	.37½	–
Lead naphthenate liq., 24% Pb. dms., frt. alld. .... lb.	1.11	–
Lead nitrate tech., cryst., 400-lb. dms., t.l., works .... lb.	.32½	–
Lead peroxide (see Lead dioxide).		
Lead red, 95% Pb_3O_4, or less, bgs. c.l., works .... lb.	.38	.38½
Lead red, 97% Pb_3O_4, bgs. c.l., works .... lb.	.38½	.39
Lead, red, 98% Pb_3O_4, bgs., c.l., same basis .... lb.	.39½	–
Lead silicate (see Lead, white, basic silicate).		
Lead silicochromate, bgs., c.l., works .... lb.	.35	–
Lead sulfate (see Lead, blue, basic sulfate and Lead, white, basic sulfate)		
Lead, white, basic carbonate, bgs., c.l., frt. alld. .... lb.	1.80	1.40
Lead, white, basic, silicate, bgs., c.l., same basis .... lb.	.87	–
Lead, white, basic sulfate, bgs., c.l., same basis .... lb.	.85	–
Lecithin, edible, tech., bleached, non-ret. dms., l.c.l., works ..... lb.	.36	–
unbleached non-ret. dms., l.c.l., same basis .... lb.	.34	–
edible, tech, bleached, non-ret., dms., t.l., works .... lb.	.28	–
unbleached non-ret., dms., t.l., same basis .... lb.	.28	–
Lemon oil, Argentina .... kilo	14.75	–
Brazil .... lb.	7.95	–
Calif., USP, dms. .... lb.	8.50	9.50
Italian .... lb.	12.50	–
Lemongrass oil, Indian, dms. ..... kilo	11.26	–
Guatemalan, dms. .... lb.	2.26	–
dl-Leucine, dms., 1 kilo works .... kilo	60.00	90.00
Licorice root, whole, bls. .... lb.	.40	.50
gran., bls. .... lb.	.70	.90
powd., bls. .... lb.	.95	–
Lignosulfonate (see under Ammonium or Sodium lignin sulfonate).		
Lime, chemical, pebble (quicklime), bulk, 50,000 lbs., works, f.o.b. plants .... ton	39.00	45.00
Lime, chemical, hydrated, bulk, same basis .... ton	46.00	50.00
bgs., same basis .... ton	54.00	57.00
Lime, NF, puril., 100-lb. dms. ..... lb.	.89	–
Lime oil, dist., Mexican, dms. ..... lb.	5.60	–
Haitian, dist., dms. .... lb.	6.50	–
expressed, dms. .... lb.	17.50	–
Lime salts (see Calcium).		
d-Limonene, dms. .... kilo	.70	.65
Linalool ex bois de rose oil, dms. .... lb.	6.35	–
syn., 98-100% dms., f.o.b. works .. lb.	2.93	–
Linalool oxide, syn., 55-gal. dm. ... lb.	7.75	–
Linalyl acetate ex bois de rose oil, 90-92%, dms. .... lb.	16.00	21.00
syn. 96-100%, dms., f.o.b. works. lb.	8.10	–
Linalyl benzoate, syn., 55-gal. dms. lb.	6.00	–
Linalyl cinnamate, syn., 55-gal. dms. .... lb.	59.85	–
Linalyl formate, syn., 55-gal. dms. .. lb.	7.75	8.50
Linalyl isobutyrate, syn., 55-gal. dms. .... lb.	6.50	6.55
Lindeno, 20% formulation, dms., divd .... gal	13.10	–
99.9% tech., dms., t.l., divd .... lb.	6.50	–
Linalyl propionate, syn., 55-gal. dms. .... lb.	7.90	–
Linden flowers, with leaves, bls. .... lb.	.78	.86
without leaves, bls. .... lb.	.90	1.15
Linseed meal (see Oils, Fats & Waxes market report).		
Linseed oil, (see Oils, Fats & Waxes market report)		
Linseed oil fatty acid, dist., dms. ... lb.	.60	.67
tanks .... lb.	.53	.62
Litharge, coml., powd., bgs., c.l., works .... lb.	.34½	.40
Lithium bromide, anhyd., dms., ton lots, divd. .... lb.	6.27	–
soln., same basis .... lb.	4.00	4.12
Lithium carbonate, powd., bgs., c.l., t.l., divd. .... lb.	1.50	–
Lithium chloride, anhyd., c.l., t.l., divd. .... lb.	3.62	3.49
soln., dms., c.l., t.l., divd. ..... lb.	2.94	2.95
Lithium fluoride, dms., c.l., t.l., divd. lb.	4.80	5.12
Lithium hydride, c.l., t.l., divd. 10,000 or more .... lb.	23.50	–
Lithium hydroxide, monohydrate, dms., c.l., t.l., divd. ..... lb.	1.93	–
Lithium hypochlorite, c.l., t.l., works lb.	1.07	–
Lithium metal, 1,000-lb. lots or more, divd. .... lb.	22.70	–
Lithium nitrate, tech., dms., 100-lb. lots .... lb.	3.28	–
Lithium stearate, bgs., c.l., frt. ald. . lb.	1.01	–
Lithium sulfate, anhydrous, t.l. divd. lb.	3.09	–
Lithol red toner, barium, dms., frt. alld. .... lb.	3.27	–
calcium, dms., same basis ... lb.	3.50	–
Lithol rubine toner (red 57), resinated, dms., frt. ald. .... lb.	5.60	–
Litsea cubeba oil, dms. .... lb.	2.75	–
Locust bean gum, powd., bgs. ..... lb.	4.75	5.00
2,4-Lutidine, dms., t.l., frt. equald. kilo	5.75	–
Lycopodium, 50-lb. dms. .... lb.	8.00	10.00
1-Lysine monohydrochloride, feed grade, 10,000 lbs. divd. ... lb.	1.35	1.40

M

Mace, East Indian, siftings .... lb.	5.40	–
Siauw #2 .... lb.	5.90	6.00
Magnesia, tech., light, neoprene-grade, bgs., c.l., t.l., works lb.	.76	.81
Magnesia, syn., tech., chemical-grade, bulk, c.l., t.l. works .... ton	330.00	–
bags, c.l., t.l., same basis .... ton	365.00	–
deadburned, bulk, same basis .... ton	392.00	–
bgs., same basis .... ton	409.00	–
Magnesia, nat., tech., heavy, 85%, 150 mesh, bulk, c.l., t.l., f.o.b. Nev. .... ton	232.00	–
60%, 325 mesh, same basis .. ton	285.00	–
Magnesium bromide, 80-lb. dms., hexahydrate .... lb.	2.60	–
Magnesium carbonate, light, tech., bgs., c.l., t.l., works, frt. equald. .... lb.	.73	.78
USP, lite bgs., c.l., same basis .. lb.	.74	.80
USP, heavy, bgs., c.l., same basis . lb.	.63	–
Magnesium chloride, anhyd., 62%, flake or pebble dms., c.l., works .... lb.	.12¼	.15
Magnesium chloride, hydrous, 69%, flake, bgs., c.l., works ..... lb.	.14½	–
Magnesium gluconate, 100-lb. dms. f.o.b. works, E. .... lb.	4.25	–
Magnesium hydroxide, NF, powd., dms., c.l., t.l., works frt. equald. .... lb.	.75	–
Magnesium lauryl sulfate, tanks, f.o.b. works .... lb.	.22	.26½
Magnesium metal, 99.8%, ingots, 10,000-lb. lots or more. f.o.b. Freeport, Tex. .... lb.	1.53	–
die casting alloys .... lb.	1.29	1.33
Magnesium nitrate, tech., flake, 250-lb. dms., t.l., works .... lb.	.32	–
Magnesium oxide, USP, light, bgs., c.l., works, frt. equald. ...... lb.	1.65	–
heavy, dms., c.l., same basis ... lb.	1.54	–
Magnesium oxide, tech. (see Magnesia).		
Magnesium phosphate, tribasic, tech. 60-lb. bgs., f.o.b. .... lb.	1.00	–
Magnesium silicate (see Talc).		
Magnesium silicofluoride, bgs., c.l., t.l. works .... lb.	.1845	.1800
Magnesium stearate, bulk, t.l. ..... lb.	.95	1.06
Magnesium sulfate 10% Mg. (epsom salts), tech. bgs., t.l., works .... lb.	.14	–
bulk, same basis .... lb.	.13	–
USP, cryst., bgs., same basis . lb.	.13½	–
USP, cryst., bulk, same basis . lb.	.14½	–
Magnesium sulfate, 17% Mg. (synthetic monohydrate), tech. bgs. f.l., works .... lbs.	.80	–
CP, same basis .... lbs.	1.25	–
Magnesium sulfate, anhydrous, CP bgs., t.l., works .... lbs.	1.76	–
Magnesium sulfate trihydrate, tech., bgs., t.l., works .... lb.	.45	–
Magnesium trisilicate, USP, powd., lb. dms. 8,000-lb. lots .... lb.	.38	–
USP, micronized powd., dms., 375-lb. lots .... lb.	.83	–
Malathion, tech., dms., t.l., works. . lb.	1.62	–
Maleic acid, cryst., powd., drums, 100 kilos, f.o.b. .... kilos	3.20	–
drums, tons, f.o.b. .... kilos	2.80	–
Maleic anhydride, bgs., c.l., works, frt. equald. .... lb.	.55	.59
tanks, works, frt. equald. ..... lb.	.53	–
Malic acid, puril. and food grades. 50-lb. bgs., t.l., c.l., divd. .... lb.	.81	.84
Mandarin oil, Brazilian, dms. ...... lb.	17.75	–
Mandelic acid, dms., 1,000 kilo lots .... kilo	6.00	10.00
Manganese acetate, dihydrate, dms., divd. .... lb.	.43½	.46
tetrahydrate, dms., t.l., divd. .... lb.	.48	–
Manganese borate printing ink drier. lb.	1.66	1.80
Manganese borate, tech., dms. ..... lb.	.80	.99
Manganese carbonate, chemical grade, 46% Mn. bgs., 20,000-lb. lots or more, works. ..... lb.	1.05	–
Manganese chloride, anhyd., dms., 20,000-lb. lots or more ..... lb.	.81	–
Manganese dioxide, nat., African, grd., 74%-76% MnO_2, 100-lb. bgs., t.l., works .... ton	200.00	–
84% MnO_2, same basis .... ton	260.00	380.00
Manganese dioxide, syn., cryst., battery grade, 90%-92% MnO_2, 100-lb. bgs., c.l., works. .. lb.	.70	.87½
chemical, ferrite grade, same basis .... lb.	.49	.61
Manganese gluconate, FCC grade, 100-lb dms., f.o.b. works ..... lb.	3.60	–
Manganese hydrate dms., divd. .... lb.	.35	.38
Manganese hypophosphite, NF, dms. .... lb.	8.75	–
Manganese metal, electrolytic, No. 1 chip, bulk, c.l., works ...... lb.	.38¼	–
dms., c.l., works .... lb.	.3435	–
Manganese naphthenate, liq., 6% Mn. dms., divd. .... lb.	.67	–
Manganese resinate, fused, 3½% Mn. dms., frt. ald. .... lb.	.34¼	–
precip. 6½-7% Mn. dms. .... lb.	.42	–
Manganese sulfate, fertilizer grade, run-of-pile, 75%-78% $MnSO_4$, 25 kilo bgs., 50-ton cars, divd. E. of Miss. .... ton	260.00	–
bulk, hopper cars, same basis .. ton	245.00	–
Manganese sulfate, 28% Mn, gran., bgs., c.l., t.l., works ..... ton	330.00	–
Manganese tallate, liq., 6% Mn, dms., frt. alld. .... lb.	.60	–
Mannitol, coml., powd., dms., t.l., works .... lb.	3.02	–
Marjoram, French .... lb.	.86	.89
Egyptian .... lb.	.81	.82
MBT (see 2-Mercaptobenzothiazole).		
MBTS (see Mercaptobenzothiazyl disulfide).		
MDI (see Diphenylmethane 4,4,-di-isocyanate)		
Melamine, bgs., c.l., t.l., 40,000-lb. min., f.o.b. works .... lb.	.51½	.59½
bulk, c.l., t.l., same basis .... lb.	.50	.58
Melamine-formaldehyde resin, e.p., t.l. frt. ald .... lb.	.55	.60
molding compound, same basis .... lb.	.46½	–
Menhaden oil, crude, tanks, works Atlantic Coast .... lb.	.12	–
Gulf ports, same basis .... lb.	.13	–
Menthol, nat., USP, Brazilian large and regular crystals, spot, cs., bulk .... lb.	8.50	8.75
syn., USP, racemic, 100-450 lbs. lb.	9.00	–
2-Mercaptobenzothiazole, bgs., t.l., works, frt. ald. .... lb.	1.26	1.55
Mercaptobenzothiazyl disulfide t.l., dms., works, frt. ald. ..... lb.	1.33	1.66
Mercuric chloride NF, gran., powd., 100-lb. dms., f.o.b. works .. lb.	6.50	–
Mercuric oxide, red, puril., 100-lb. dms., f.o.b. works .... lb.	7.00	7.25
tech., 100-lb. dms., same basis .... lb.	6.50	7.00
yellow, NF, 100-lb. dms., same basis .... lb.	7.00	7.25
tech., 100-lb. dms., same basis .... lb.	6.50	7.50
Mercurous chloride (see Calomel).		
Mercury, ammoniated (see White precipitate USP XV).		
Mesityl oxide, tanks, divd. .... lb.	.46	–
Methacrylic acid, glacial, 99%, dms., t.l., frt. equald. .... lb.	.87	–
tanks, works, frt. equald. ..... lb.	.78	–
d-Methamphetamine hydrochloride, dms. .... lb.	12.00	18.00
dl-Methamphetamine hydrochloride, dms. .... lb.	4.50	7.00
Methanol, syn., barges, f.o.b. producing point, Gulf Coast .... gal.	.28	–
Methenamine (see Hexamethylenetetramine).		
Methionine hydroxyanalogue, dry. 86% activity t.l., frt. ald. ... lb.	.86	–
liquid, 88% activity, t.l. frt. ald. .... lb.	.88	–
dl-Methionine (see Racemethionine)		
Methoxychlor, 50% wettable powder, dealers, dms. .... lb.	2.05	–
Methyl abietate, non-ret. dms., c.l. divd. E. .... lb.	9.40	–
Methyl abietate, hydrogenated, non-ret. dms., t.c.l., same basis .... lb.	10.00	–
Methyl acetoacetate, East, divd. bulk .... lb.	.85	–
Methyl acrylate, tanks, divd. ...... lb.	86.00	–
Methyl alcohol (see Methanol)		
Methyl amyl alcohol, tanks, divd. ... lb.	.55	–
Methyl n-amyl ketone, tks., divd. ... lb.	.54½	–
Methyl anthranilate, tech., dms., f.o.b. .... lb.	1.41	2.65
Methyl benzoate, dms., t.l. .... lb.	.25	–
99.9%, perf. grade, dms., t.l. .... lb.	1.85	–
Methyl bromide, dist., tanks, 140,000 lbs. min., frt. alld. .... lb.	.56¾	–
Methylcellulose, premium, USP (visc. 400 through 4,000 cps) 50 lb. bags, t.l., cl., 30,000 lb., min., divd., zone 1 .... lb.	2.73	–
Methylcellulose, premium USP (visc. 15 cps) 50 lb. bags, t.l., cl., 30,000 lbs., divd., zone 1 . lb.	2.66	–
Methylcellulose, (visc. 400 through 4,000 cps) 50 lb. bgs., t.l., cl., 30,000 lbs., divd., zone 1 .. lb.	2.24	–
Methylcellulose (visc. 15 to 25 cps) 50 lb. bags, t.l., cl., 30,000 lb. min., divd., zone 1 .... lb.	2.52	–
Methyl chloride, indust. bulk, tanks, f.o.b. works .... lb.	.25½	.28
Methyl chloroform (see 1,1,1-Trichloroethane).		
Methyl cinnamate, dms. .... lb.	4.85	–
Methyl p-cresol, dms. .... lb.	8.00	–
Methyl ethyl ketone, tanks, divd, E.. lb.	.235	–
Methyl eugenol, 25-lb. cns. .... lb.	3.56	3.80
Methyl formate, pure, non-ret. dms., works .... lb.	.41	–
tanks, same basis .... lb.	.26	–
tech., tanks, works .... lb.	.31	–
Methyl heptanol, syn., 55-gal. dms. lb.	14.50	–
Methyl heptenone, pure, dms. ...... lb.	7.30	–
Methyl heptin carbonate, dms. ..... lb.	45.00	–
Methyl p-hydroxybenzoate (see Methylparaben)		
Methyl ionone, std., dms. .... lb.	7.30	9.40
Methyl isoamyl ketone, tanks, divd. E. .... lb.	.51	–
Methyl isobutyl carbinol (see Methyl amyl alcohol).		
Methyl isobutyl ketone, tanks, divd. lb.	.35	–
divd. zone 2 (Calif.) .... lb.	.36	–
divd. zone 3 (W. of Rockies, excluding Calif.) .... lb.	.41	–
Methyl isoeugenol, 25-lb. cns. ..... lb.	8.50	10.40
Methyl methacrylate, tanks, divd. ... lb.	.62	–
Methyl naphthyl ketone, cryst., dms. .... lb.	14.00	–
Methylparaben, USP, 500 kilograms, f.o.b. .... kilo	10.14	–
tech., 500 kilograms, f.o.b. .... kilo	6.70	–
Methyl parathion, tech., 80%; dms., frt. alld. E. .... lb.	1.65	–
Methyl phenylacetate, dms. .... lb.	3.80	5.40
N-Methyl 2-pyrrolidone, tanks, f.o.b. plant .... lb.	1.32	–
dms., c.l., t.l., same basis ...... lb.	1.40	–
Methyl rosaniline chloride, USP, 1-lb. cans .... lb.	5.60	–
Methyl salicylate, NF, 1000-lb. dms., t.l., frt. ald. .... lb.	1.79	1.94
Methyl violet (see Methyl rosaniline chloride).		
Methyl violet toner, molybdated, PMA, bbls., divd. E. of Rockies. . lb.	3.25	–
Methyl violet toner, tungstated, PTA, bbls., same basis .... lb.	4.70	5.20
4,4,-Methylene dianiline (p,p-diaminodiphenyl methane) crude, dms., t.l., f.o.b. ..... lb.	1.75	–
puril., flake, same basis .... lb.	2.25	–
Methylene di-p-phenylene di-isocyanate (see diphenylmethane 4,4,-di-isocyanate).		
Methylene chloride, tanks, 4,000 gal.-min., consumers, divd. .... lb.	.35	–
Methylpentanediol (see Hexylene glycol).		
Methylphenylpyrazolone (see 1-Phenyl-3-methyl-pyrazolone-5).		
a-Methylstyrene, f.o.b. shipping pt.. lb.	.44	–
p-Methylnaphthalene, bulk, works. gal.	1.38	–
Methylthionine chloride (see Methylene blue).		
Mica, dry-grd., joint cement, plastic, 50 lb., bgs., c.l., works .... lb.	.07½	–
dry-grd., roofing, 20 to 80 mesh. works .... lb.	.07	–
paint or lacq., wet-grd., 325-mesh, bgs., c.l., f.o.b. works ...... lb.	.16¾	–
rubber, bgs., c.l., f.o.b. works .... lb.	.16¾	–
wallpaper, bgs., c.l., f.o.b. works. lb.	.22	–
Microcrystalline wax, petroleum, coating grades, FDA, tanks, works .... lb.	.38½	.46½
laminating grades, FDA, tanks, works .... lb.	.38½	.48
Mineral oil, white, 50-65 vis., USP light tanks, refy .... gal.	2.18	–
65-75 vis., tanks, refy. ...... gal.	2.22	–
80-90 vis., tanks, refy. ...... gal.	2.25	–
145-155 vis., tanks, refy. .... gal.	2.33	–
USP 180-190 vis., tanks, refy. .... gal.	2.34	–
200-210 vis., tanks, refy. .... gal.	2.36	–
340-350 vis., tanks, refy. .... gal.	2.45	–
Mineral spirits, petroleum, odorless, tanks, New Jersey .... gal.	1.63	1.38
Houston, Tex. .... gal.	1.76	1.79
Mineral spirits, petroleum, regular, tanks, New Jersey .... gal.	1.41	1.49
Houston, Tex. .... gal.	1.41	1.43
Molybdate orange, bbls. .... lb.	1.52	1.95
Molybdenum metal, coml., powd., 99.8%, dms., works .... lb.	13.50	–
Molybdenum trioxide, CP, dms., works, 24,000 lbs. or more. lb.	5.25	–
tech., chemical, dms., 24,000 lbs. or more, basis .... lb.	2.65	2.85
tech. metallurgical, dms. same basis lb.	2.85	2.65
Molybdic acid (See Ammonium Dimolybdate)		
Monoammonium phosphate, fert. grade, min. 13% N. 52% P. bulk, c.l., f.o.b. Fla. works .... ton	155.00	–
Monoammonium phosphate, tech., bgs., c.l., t.l., works, frt. equald. .... 100 lbs.	54.00	–
food grade, bgs, c.l., t.l., same basis .... 100 lbs.	59.25	–
Mono-tert-butyl-m-cresol, bulk, t.l. lb.	1.69	–
Monobutylamine, bulk, divd. .... lb.	.96	1.00
Monochloroacetic acid, puril. (see Chloroacetic acid, mono).		
Monochlorobenzene, tanks, f.o.b. ... lb.	.42½	–
Monoethanolamine, tanks, frt. ald. E. .... lb.	.43	.48
Monoethylamine, 70% aqueous tanks, frt. prepaid, 100% basis ... lb.	.94	–
anhyd., tanks, same basis ..... lb.	.92	–
Monoisopropanolamine, dms., c.l., frt. alld. E. .... lb.	.78	–
tanks, same basis .... lb.	.66	–
Monoisopropylamine, anhyd., dms., c.l., frt. prepaid .... lb.	.79	–
tanks, same basis .... lb.	.76	–
Monomethylamine, anhyd., tanks, contained basis frt. equald. ... lb	.54½	–
25% soln., tanks, frt. ald. 100% basis .... lb.	.57	–
40-60% soln., tanks, frt. equald. 100% basis .... lb.	.63½	–
Monopotassium glutamate, dms., 990 lb. or more, frt. ald. .... lb.	2.50	–
Monosodium glutamate, 50-lb. bgs. c.l., t.l., divd. .... lb.	.76	.80
100-lb. drums, c.l., t.l., divd. ... lb.	.85	–
Monosodium phosphate (see Sodium phosphate, monobasic).		
Montan wax, crude, imp., German . lb.	.55	.57
dom., Calif., bgs., c.l., t.l., f.o.b. shipt. pt. .... lb.	.81	–
refd., dom. Calif., same basis .... lb.		
Morphine alkaloid, NF, 25 k lots .. kilo	1018.00	–
Morphine sulfate, USP, 25 k lots .. kilo	850.00	–
Morpholine, dms., c.l., frt. ald. E. .. lb.	1.02	–
tanks, frt. ald., E. .... lb.	.94	–
Muriatic acid (see Hydrochloric acid).		
Musk, syn., ambrette, 25-lb. cns. .. lb.	8.25	7.00
Musk, syn., ketone, dms. .... lb.	9.50	–
Musk, syn., xylol, dms. .... lb.	3.00	–
Mustard oil, syn. (see Allylisothiocyanate).		
Mustard seed, Brown No. 1 .... lb.	.20	–
Canadian No. 1 Yellow .... lb.	.21	–
Oriental No. 1 bgs. .... lb.	.20	–
Myrcia oil (see Bay oil).		
Myristic acid, coml., pure, t.l., bgs. . lb.	1.30	–
tanks .... lb.	1.12	–
Myristica oil (see Nutmeg oil).		
Myrrh gum, bgs. .... lb.	2.25	–

N

Naphtha, high solvency (see Solvent naphtha, petroleum).		
Naphtha, petroleum, cleaners (see Cleaner's naphtha).		
Naphtha, VM&P, petroleum, tanks, New Jersey and New York .... gal.	1.29	1.34
Houston, Tex. .... gal.	1.20	–
Naphthalene, crude, dom., 78°, tanks, works .... lb.	.22	–
Naphthalene, phthalic anhydride grade, tanks, works .... lb.	.23½	–
Naphthalene, petroleum, 80°C., f.o.b. .... lb.	.30	.32½
Naphthalene, refd., balls, flakes, whole salers, jobbers, dms., works .... lb.	.65	.77
Naphthenic acid, crude, bulk, works lb.	.30	.43
refined, 220 acid, same basis ... lb.	.80	.90
a-Naphthol, ground, dms., t.l. divd. . lb.	1.61	–
b-Naphthol, tech. flake, 80-lb. bgs., c.l., works .... lb.	1.10	–
Naphthol arylide red toner deep shades, bbls. .... lb.	13.40	15.45
light shades, bbls. .... lb.	9.20	13.00
2-Naphthol-3,6-disulfonic acid, disodium salt (see R salt).		
1-Naphthol-5-sulfonic acid (see L- acid).		
1-Naphthol-5-sulfonic 8-amino acid (see S acid).		
Naphthylamine sulfonic mixed acid (see Cleve's acid).		
a-Naphthylamine, tanks, f.o.b. works .... lb.	2.10	–
1-Naphthylamine-5-sulfonic acid (see Laurent's acid).		
2-Naphthylamine-4,8 disulfonic acid (see Cassella acid).		
2-Naphthylamine-1-sulfonic acid (see Tobias acid).		
Neatsfoot oil, 20°F, t.l., f.o.b. works dms. .... lb.	.52	–
tanks, f.o.b. works .... lb.	.47	–
30°F, t.l., f.o.b. works .... lb.	.52	–
tanks, f.o.b. works .... lb.	.44	–
40°F, dms., t.l., f.o.b. works .... lb.	.46	.49
tanks, f.o.b. works .... lb.	.39	–
Delivered prices apply on shipments within 300-mile radius of Philadelphia, Pa.; other areas, 1¼c. higher; Texas, 2c. higher and West Coast 3c. higher.		
Neomycin sulfate, USP, non-sterile, dms., 50-kilo. lots, activity basis, divd. .... kilo.	75.00	–
Neopentyl glycol, slurry, 90%, c.l., t.l., divd. .... lb.	.522	–
powder, flake, bgs. t.l., divd. .. lb.	.598	–
Nerol, tech., dms. .... lb.	5.30	5.75
perf. grade, dms. .... lb.	4.80	5.00
Neroli oil, Tunisian, bots. .... kilo	2,700.00	–
Nerolidol syn. 55-gal. dms. .... lb.	7.05	–
Nerolin, Bromelin .... kilo	7.22	–
Niacinamide, USP, t.l. dms. .... kilo.	8.00	–
Niacin NF, dms., 5,000 kilos or more, divd. .... kilo	7.50	–
feed-grade, 98-99.5%, bgs., same basis .... kilo.	5.10	5.60
Nickel acetate, dms., 5,000-lbs. to t.l., divd. E. .... lb.	1.82	–
Nickel carbonate, dms., bgs., 5,000-lbs. to t.l., divd. E. .... lb.	3.45	–
Nickel chloride, bgs., 10,000-lbs. to t.l., divd. E. .... lb.	1.19	–
Nickel fluoborate, liq. conc., dms., t.l., divd. E. .... lb.	1.25	–
Nickel metal, electro cathodes, cs., works .... lb.	3.45	–
Nickel nitrate, dms., bgs., t.l., divd. E. .... lb.	1.18	–
Nickel oxide, 75%-78% Ni, dms., 500-lb. lots, f.o.b. works .... lb.	2.60	–
Nickel sulfate, bgs., t.l., divd E. .... lb.	.80	.90
Nicotinic acid (see Niacin).		
Nicotinamide (see Niacinamide).		
Nitric acid, 36° Be., 38°Be, 40°Be, 42°Be. tanks, c.l., works NF, 100% basis .... ton	195.00	–
94½% to 98% HNO_3, tanks, works, 100% basis .... ton	280.00	–
o-Nitroaniline, flake, dms., t.l. works .... lb.	1.51	–
molten, refd., tanks, works ..... lb.	1.44	–
molten, tech., works .... lb.	1.37	–
o-Nitroaniline, orange toner, bgs. frt. alld. .... lb.	1.90	–
p-Nitroaniline, dms., c.l., t.l., 30,000 lb. min., works .... lb.	1.63	–
o-Nitroanisole, 100-kilo lots ..... kilo	8.75	–
Nitrobenzene, tanks, f.o.b .... lb.	.33	.34
o-Nitrochlorobenzene, dms., t.l., c.l., f.o.b. .... lb.	.82	–
tanks, same basis .... lb.	.74	–
2-Nitro-p-cresol, tech., dms., t.l., frt. ald. .... lb.	1.75	–
Nitroethane, tanks, divd. E. ...... lb.	2.50	–
Nitrogen solutions, direct application, over 32% N, and mgl. type, works .... unit-ton.	1.20	–
direct application, 19-32% N. .... unit-ton.	1.26	1.48
Nitrogenous sewage sludge, processed, bulk, f.o.b. Chicago .... unit ton	4.10	–
NOTE: Price is per unit NH_3 plus $1. per unit a.p.a. bulk, f.o.b. producer's works, Chicago.		
Nitrogenous tankage, processed, bulk, per unit-ton NH_3, f.o.b. Carrolville, Wisc. .... unit ton	7.00	–
f.o.b. Forbes, Mo. .... unit ton	6.75	–
expanded, bulk, c.l., per unit-ton N, f.o.b. Forrestdale, R.I. unit ton	8.35	–
Nitromethane, dms., t.l., divd E. ... lb.	2.37	–
o-Nitrophenol, dms , f.o.b. works ... lb.	1.00	–
p-Nitrophenol, dms., c.l., f.o.b. works .... lb.	1.05	1.45
2-Nitropropane, tanks, frt. ald. E. .. lb.	.55	–
m-Nitrotoluene, tech., dms., frt. ald. lb.	1.15	–
o-Nitrotoluene, dms., c.l., f.o.b. ... lb.	.65	–
tanks, same basis .... lb.	.48	.57
p-Nitrotoluene, tech. dms., c.l., works .... lb.	.83	.65
tanks, works .... lb.	.70	–
Nonylphenol, tanks, f.o.b. E. of Rockies, min. frt. ald. .... lb.	.49	.53½
Norephedrine hydrochloride (see Phenylpropanolamine hydrochloride)		
Nutmeg oil, dist., East Indian, NF, dms. .... kilo	32.00	34.00
Nutmeg, East Indian, whole ...... lb.	3.10	3.15

O

Ochre (see Iron oxide, yellow, nat.)		
Ocotea cymbarum oil dms. .... kilo	5.15	5.20
Ocotea, Chinese 90% .... kilo	5.40	5.90
1-Octadecanol, syn., tanks, f.o.b. .... lb.	.43½	–
1-Octanol, syn., tanks, f.o.b. .... lb.	.70	–
n-Octane, 97% min., tanks, f.o.b. Houston, Tex. .... gal.	6.25	–
Octyl alcohol, perfumer's grade, bots., cns. .... lb.	1.40	1.75
n-Octyl, n-decyl phthalate, tanks, divd. .... lb.	.33½	.37
tert-Octylamine, dms., c.l., t.l., works. lb.	2.60	–
Octylphenol, molten, t.c., works .... lb.	.75	.76½
Oiticica oil, liq. dms. .... lb.	.40	–
tanks .... lb.	.32	–
Oleic acid, dbl.-dist. (white), dms. .. lb.	.48	.59
tanks .... lb.	.38	.44
Oleic acid, s.d. (red) dms. .... lb.	.43	.49
tanks .... lb.	.36	.41

CHEMICAL PRICES

WEEK ENDING DEC. 26, 1986

Oleum (see Sulfuric acid, fuming).		
Olibanum gum, tears, bgs. .... lb.	2.10	–
Olive oil, edible, Spanish, dms. .... gal.	8.00	–
Italian B-type .... gal.	5.35	–
Olivine, crude, works .... ton	12.00	–
20 mesh. works .... ton	15.00	–
100 mesh. works .... ton	20.00	–
Opium, USP, gran. powd. 25-kilo lots .... kilo	125.00	–
Orange oil, expressed, USP, Calif., dms., f.o.b. plant .... lb.	1.20	–
expressed Valencia, dms. ...... lb.	.75	–
Calif., dist., cns. f.o.b. plant ..... lb.	1.25	–
Florida, dms. .... lb.	.60	.65
Brazilian .... kilo	.90	–
West Indian, bitter, NF X, cns., dms. .... lb.	13.00	–
Orange peel, bitter, Haitian bls. .... lb.	.38	–
Oregano, Greece, 30M .... lb.	2.60	–
Turkey .... lb.	2.80	–
Mexico .... lb.	1.05	–
Origanum oil, Spanish, cns. ...... kilo	35.00	–
Orris root, Florentine, bls. .... lb.	4.00	–
powd., bbls., bxs. .... lb.	4.60	5.00
Verona bls. .... lb.	3.00	–
powd., bbls., bxs. .... lb.	4.60	5.00
Ouricury wax, refd., pure, bgs. .... lb.	3.25	3.35
Oxalic acid, bgs., c.l., works .... lb.	.44	
b-Oxynaphthoic acid dms. works, tech. .... lb.	2.55	–
Oxyquinoline base, pure, 1,000 lbs., frt. ald. .... lb	8.00	–
Oxyquinoline sulfate, 100 lbs. frt. ald .... lb	4.00	–

P

Palladium metal, works .... Troy-oz	118.00	–
Palm oil, (see Oils, Fats & Waxes Market Report)		
Palm oil acid, dbl-dist dms .... lb.	.31½	–
tanks .... lb.	.30	–
s.d., dms. .... lb.	.42	.45
tanks .... lb.	.35	–
Palm kernel oil, bulk, c.t.l., U.S. ports .... lb.	.18½	.19½
Palmarosa oil, Indian dms .... kilo	31.00	33.00
Palmitic acid, 90%, tech., bags ..... lb.	.53	–
tanks .... lb.	.51	–
Papaverine hydrochloride, NF powd., imp. bulk .... kilo	56.00	–
Paprika, Hungarian, 100AU bgs ..... lb	.80	–
Spanish, 110 AU bgs .... lb	.90	–
Paraffin, fully-refd., 127-130F., ASTM, tanks, refy	.29	.35
130-135F., ASTM, tanks, refy.	.33½	.39
140-145F., ASTM, tanks, refy.	.35	.41½
150-155F., ASTM, tanks, refy	.41½	.46
slack wax, 5% oil, tanks refy	.19	–
12% oil, tanks refy	.21	–
20% oil, tanks refy	.16	–
AMP temperatures are an arbitrary 3F higher than ASTP.		
Paraformaldehyde, 91%, flake, bgs c.l., t.l., divd .... lb	.29½	–
95%, powd., bgs., c.t., t.l. divd. lb	.39½	–
Paraldehyde, tech., 98%, 55-gal dms., t.l., divd E. .... lb.	.76½	–
tanks, divd. E .... lb	.58½	–
Parathion, ethyl, dms., frt. alld. .... lb	1.75	–
Parathion methyl (see Methyl parathion).		
Para toner red, bbls. .... lb.	3.75	–
chlorinated, (red 4) kgs. .... lb.	3.75	–
Patchouli oil, Indonesian, dms. .... kilo	18.50	20.00
Patchouli oil, Chinese .... kilo	19.00	21.00
Peach kernel oil, USP (see Apricot kernel oil).		
Peanut meal (see Oils, Fats & Waxes market report).		
Peanut oil (see Oils, Fats & Waxes market report).		
Pectin dom., NF, citrus, powd., 100-kilo lots divd. .... lb.	3.30	3.70
Pelargonic acid, nat., tanks, min. frt. ald. .... lb.	.70	–
syn., tanks, f.o.b. frt. ald. ..... lb.	.70	–
Penicillin, potassium, non-sterile, 200-billion-unit lots .... billion units	25.00	30.00
Penicillin, procaine, sterile 50- billion-unit lots, bulk .... billion units.	38.00	–
Pennyroyal oil, dms. .... lb.	10.25	–
Pentachlorophenol, 50-lb. bgs., t.l., f.o.b. Wichita, Kan. .... lb.	.55	–
Pentaerythritol, tech., bgs., c.l., f.o.b., frt. ald. .... lb.	.71	.72
Pentaerythritol, di- and tri-isomers (see Dipentaerythritol and Tripentaerythritol).		
Pentaerythritol triacrylate, t.l. dms., f.o.b. works .... lb.	1.50	–
Pentobarbital, dms., 100 lbs. or more, frt. ald. .... lb.	7.00	–
Pentobarbital-sodium, dms., 100 lbs. or more, divd. .... lb.	14.00	–
Pentylene tetrazol, NF, dms., 200-kilo lots .... kilo	32.00	–
Pepper, black, Brazilian, bgs. ...... lb.	2.48	–
Lampong, bgs. .... lb.	2.48	–
Malabar, bgs. .... lb.	2.48	–
Tellicherry, bgs. .... lb.	2.55	–
Pepper, red Chinese Fukien rice bgs lb.	.79	–
Hainan, bgs. .... lb.	.85	–
Liling, bgs. .... lb.	.76	–
Indian, S-4, bgs. .... lb.	.60	–
Pakistan, dundicuts, bgs. .... lb.	.58	–
Pepper, white, Muntok, bgs. ...... lb.	2.97	–
Peppermint leaves, imp., dms. ..... lb.	2.00	–
Peppermint oil, Madras .... lb.	14.00	–
Midwest .... lb.	16.00	–
Willamette .... lb.	11.00	–
Yakima .... lb.	8.75	–
syn., dms., f.o.b. works .... lb.	7.00	9.00
Brazilian .... kilo	8.50	–
Chinese .... kilo	8.85	–

CHEMICAL PRICES

WEEK ENDING DEC. 26, 1986

Perchloroethylene, dry cleaning grade, distr., tanks, divd. .... lb.	.28½	-
indust., grade, consumers, tanks, divd. .... lb.	.31	-
Perl acid, dms. .... lb.	2.55	-
Permanent red 2B, (red 48), calcium salts, dms., frt. alld. ...... lb.	5.25	-
barium salts, same basis ...... lb.	5.25	-
Peru balsam, f.o.b. .... lb.	3.25	-
Petitgrain oil, Paraguay .... lb.	5.00	-
Petrolatum, USP, snow white, dms., c.l., refy .... lb.	.365	-
tanks, refy .... lb.	.300	-
USP, soft white, dms., c.l., refy. . lb.	.385	-
tanks, refy .... lb.	.300	-
USP, lily white, dms., c.l., refy... lb.	.560	-
Petrolatum, USP, Lilly white, tanks, refy .... lb.	.295	-
USP, cream, dms., c.l., refy ..... lb.	.355	-
tanks, refy .... lb.	.290	-
USP, soft yellow, dms., c.l., refy.. lb.	.340	-
tanks, refy .... lb.	.275	-
USP, amber, dms., c.l., refy. .... lb.	.335	-
tanks, refy .... lb.	.270	-
Petroleum pitch (see Asphalt, petroleum).		
Petroleum sulfonate, 60-62%, sulfonic cont., HMW, bulk, works .. lb.	.48¾	.49
MMW, same basis .... lb.	.49	-
LMW, same basis .... lb.	.49	.48¼
Prices for 51% sulfonic content 2c per lb. lower on corresponding molecular wts.		
Phenacetin USP, powd., 200-lb. dms., 1,000-lb. lots, divd. ...... lb.	2.20	-
100-lb dms., 1,000-lb lots, divd. lb.	2.22	2.45
p-Phenetidine, dms., c.l., f.o.b. .... lb.	2.00	-
Phenobarbital, USP, dms., 500-kilo lots., f.o.b. works ..... kilo	19.50	-
Phenobarbital-sodium, NF, 500-kilo lots, f.o.b. works .... kilo	27.00	-
Phenol, syn. tanks, frt. equald. .... lb.	.25	.29
p-Phenolsulfonic acid, 65% sol'n., dms., c.l., fob works ..... lb.	.84	-
tanks, same basis. .... lb.	.58	-
Phenothiazine, indust. grade, 50-lb. bags, c.l., f.o.b. works .... lb.	2.33	-
purif. grade, same basis .... lb.	2.69	-
Phenyl acetate, dms., 100-lb. lots, works. .... lb.	1.04	-
Phenylacetic acid, pure cryst., 25-lb. cns. .... lb	4.50	-
dl-Phenylalanine, dms., 25-kilo lots. .... kilo.	84.00	-
l-Phenyl-3-carbethoxy pyrazolone-5, dms. 200-lb. lots, divd. E. . lb.	3 45	-
m-Phenylenediamine, cast, dms., c.l., t.l., f.o.b. works .... lb	2.07	-
o-Phenylenediamine, flaked, dms., t.l., f.o.b. works .... lb.	3.25	-
p-Phenylenediamine, flaked, dms., f.o.b. works .... lb.	4.00	-
Phenylephrine hydrochloride, USP 100-kilo lots or more .... kilo.	175.00	185.00
Phenylethyl acetate, dms. .... lb.	3.35	-
2-Phenylethyl alcohol, NF, dms. ... lb	2.10	2.20
b-Phenylethylamine, dms., 30,000 lbs. or more, fn. alld. .... lb.	1.60	-
Phenylethylphenyl acetate, 25-lb. cns. .... lb.	5.50	6.90
Phenylglyconic acid (see Mandelic acid).		
Phenylhydrazine, 99% min., dms... lb.	3.50	-
1-Phenyl-3-methyl-5-pyrazolone, dms., 250-lb. lots divd. E .. lb.	1.60	-
o-Phenylphenol, dms., t.l., works .. lb.	1.35	2.00
p-Phenylphenol, bgs., t.l., 40,000 lbs. or more, works. .... lb.	1.85	-
Phenylpropanolamine hydrochloride, 100-kilo dm. .... kilo	24.00	28.00
Phenylsalicylate, purif. cryst., dms., E. .... lb.	2.76	-
tech., cryst., E. .... lb.	2.25	-
flake, E. .... lb.	2.35	-
Phloxine toner (red 90), dms., frt. alld. .... lb.	1.95	2.05
Phosgene, 1-ton net. cyls., 5 to 8-cyl. quantities, works .... lb.	.55	.87
Phosphate rock, Fla., land pebble, run of mine washed, 66-68% b.p.l. bulk c.l. mines .... ton	23.15	-
vessel, Tampa, same basis .... ton	28.00	-
Phosphoric acid, com'l. and tech. grades, 75% tanks, works .... 100 lbs.	29.00	-
80% tanks, works .... 100 lbs.	31.00	-
85% N.F. tanks, f.o.b. freight equald. .... 100 lbs.	33.50	-
Food grade prices $2.00 above tech. grade.		
Phosphoric acid, agricultural grade, 52-54% a.p.a., tanks, works .... unit-ton	3.10	-
super, min. 70% a.p.a., same basis. .... unit-ton.	3.45	-
Phosphorus, white (yellow) solid dms., c.l., works, frt. equald. .... lb.	1.00	-
tanks, works, f.o.b. works. . lb.	.91	-
Phosphorus oxychloride, tanks, frt. equald. .... lb.	.40	-
Phosphorus pentasulfide, powd., dms., c.l., works... 100 lbs.	50.00	-
tote bins, sellers ...... 100 lbs.	45.00	-
Phosphorus pentoxide, dms., t.l., works. .... lb.	62	-
Phosphorus sesquisulfide, dms., cvs., c.l., works. .... lb.	.38	-
Phosphorus trichloride, dms., c.l., works. .... lb.	.40	-
tanks, works. .... lb.	.35	-
Phthalic anhydride, flake, c.l., t.l., dms., frt. equald. .... lb.	.30	-
molten, tanks, same basis ...... lb.	.27	-
Prices 1-1½c. per lb. higher on the West Coast		
Phthalimide, flake, works .... lb.	.85	-
Phthalocyanine blue toner, red shade, bbls., frt. alld. E. of Rockies ..... lb.	8.46	-
green shade, same basis .... lb.	9.30	-
resinated, bbls., same basis .... lb.	9.10	-
Phthalocyanine blue toner, water dispersable, bbls., same basis. .... lb.	9.45	17.30
Phthalocyanine green toner, all grades, bbls., frt. alld. E. of Rockies. .... lb.	9.30	14.00
Phthalocyanine green toner, resinated, bbls., same basis. .... lb.	8.85	9.46
Phthalylsulfacetamide, dms., 500-kilo lots. .... kilo.	8.61	-
Picolines, refd, mixed, bulk ...... kilo	2.91	-
Picric acid, pure paste, 25-lb. ctns., c.l., dry basis, f.o.b. Charlotte, N.C. .... lb.	8.00	-
tech., paste, 25-lb. ctns., t.l., dry basis, f.o.b. Charlotte, N.C.. lb.	5.00	-
Pigment green B, kgs. .... lb.	2.20	-
Pilocarpine hydrochloride, USP, dms. .... kilo.	1,500.00	2,000.00
Pimento see Allspice		
Pimento leaf oil, dms. .... lb.	13.90	-
Pine oil, 80% min. alcohol content, bulk, f.o.b. works.... 100 lbs	47.00	53.00
dms., c.l., t.l., same basis .... 100 lbs	51.00	54.00
a-Pinene, perfume grade. .... kilo	1.62	-
tech. grade. .... lb.	.18	.23
b-Pinene, perfumery grade. tanks. . kilo	2.30	-
tech. grade. tanks .... lb.	.35	.40
Piperazine, anhyd., dms., t.l., frt. alld. E. .... lb.	1.80	-
Piperazine citrate, 39%, dms., 1,100-lb. lots, frt. alld. .... lb.	2.25	2.35
Piperazine dihydrochloride, 53%, dms., t.l., frt. alld. .... lb.	2.00	-
Piperazine hexahydrate, 44%, dms., 1,100-lb. lots, frt. alld. .... lb.	1.80	-
Piperazine phosphate, 42%, dms., t.l., frt. alld. .... lb.	1.80	-
Piperidine dist. 98% min., dms., c.l., t.l., works. .... kilo.	6.92	-
Piperonyl butoxide dms., divd. E... lb.	5.00	-
Platinum, metal, works ..... Troy oz.	486.00	-
Polycarbonate resin, pellets, nat., t.l., frt. alld .... lb.	1.84	1.86
Polyester resin, unsaturated, g.p., orthophthalic, bulk, tankcars, frt. alld .... lb.	.51	.53
isophthalic, same basis .... lb.	.56	.62
Polyethylene resin, high-density, blow molding, g.p., hopper cars, frt. alld. .... lb.	.44	.52
injection molding, g.p., hopper cars, frt. alld .... lb.	.43	.46
extrusion, g.p., hopper cars, same basis .... lb.	.47	.48
wire and cable, nat., hopper cars, same basis. .... lb.	.64	.65
wire and cable, black, same basis .... lb.	.65	.75
Polyethylene resin, low-density, film liner, hopper cars, frt alld .. lb.	.35	.36
clarity film, hopper cars, frt., alld. .... lb.	.35	.37
pallet shrink film, hopper cars, same basis. .... lb.	.35	-
extrusion coating, hopper cars, same basis. .... lb.	.38	.42
g.p., hopper cars, same basis . lb.	.37	.36
Polyethylene linear low-density g.p. resin	.36	.40
blown film resin	.40	.43½
cast film resin	.40	.45
Polyethylene resin, low-density injection molding, g.p., hopper cars, same basis .... lb.	.45	.48
fine wire, CATV, power cable .. lb.	.70	1.15
wire and cable thermoplastic high-voltage, natural color, same basis .... lb.	.80	.90
wire and cable, XLPE low voltage, 14% carbon black, same basis .... lb.	.68	.73
wire and cable jacketing, black lb.	.80	.81
Polymyxin sulfate, USP, bulk, 50-billion units min. ...... million units	.52	-
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works. .... lb.	.73	-
Polyoxyethylene sorbitan tristearate, dms., 20,000-lb. lots, works. .... lb.	.73	-
Polypropylene resin, homopolymer, g.p., nat., t.l., frt. alld ...... lb.	.46	.48
copolymer, med. impact, nat., same basis .... lb.	.60	.68
high impact, same basis .... lb.	.53	.80
Colored material 6c. per lb. higher for each grade.		
Polystyrene resin, cryst., nat., hopper cars, frt. alld. .... lb.	.48	-
impact, nat., hopper cars, same basis .... lb.	.51	-
high heat, high impact, nat., hopper cars, same basis .... lb.	.52	-
expandable beads (EPS), pkging grade, 1,000-lb. lots. .... lb.	.69	-
modified, same basis. .... lb.	.78	-
Polyvinyl alcohol, fully hydrolyzed, medium viscosity, bgs., t.l., divd .... lb.	1.00	1.05
partially hydrolyzed, medium viscosity, bgs., t.l., divd. .... lb.	1.05	-
Polyvinyl chloride resin, g.p., homopolymer dispersion, bgs., t.l., divd .... lb.	.50	-
g.p. suspension, bulk, same basis .... lb.	.38	-
pipe grade, bulk, same basis .... lb.	.47	-
film grade, bulk, same basis .... lb.	.37	.47
Polyvinyl chloride, g.p. copolymer dispersion, same basis ...... lb.	.58	.81
g.p. copolymer suspension, same basis .... lb.	.45	.49
Poppyseed, Dutch, bgs. .... lb.	.59	-
Turkey, bgs. .... lb.	.53	-
Potash agricultural (see Potassium muriate).		
Potash, caustic, liq., 45% basis, tanks, works. .... 100 lbs.	13.00	-
West Coast, 50% basis, tanks, ex terminal .... 100 lbs.	18.08	-
reg. flake, 88-92%, 400-lb. dms., c.l., works. .... 100 lbs.	42.36	-
Potassium acetate, NF, gran., dms., t.l. works E. .... lb.	.80	1.31
Potassium bicarbonate, tech., gran., bgs., c.l. works .... lb.	.31½	-
Potassium bicarbonate, USP, gran., dms., t.l. .... lb.	.72	-
Potassium bichromate, gran., 400-lb. dms., c.l., t.l., works. ..... lb.	.48	-
Potassium bifluoride, tech., dms., t.l., works, frt. equald. ..... lb.	.45	.49
Potassium bitartrate, NF, gran, powd., bgs. .... lb.	.90	1.20
Potassium borohydride, powd. dms., 100-1,000 lbs., works ... lb.	10.00	20.00
Potassium bromate, gran., powd., 200-lb. dms., c.l., f.o.b. works. .... lb.	1.06	-
Potassium bromide, NF., gran., dms., c.l. f.o.b. works .... lb.	1.12	-
Potassium carbonate, liq., 47% K_2CO_3, tanks, t.w., works... 100 lbs.	14.60	-
dms., c.l., t.l., works. .... 100 lbs	20.65	-
calcined, 99-100% K_2CO_3, hopper cars or trucks, works ...... 100 lbs	32.50	-
bgs., c.l., t.l., works. ... 100 lbs	35.20	-
drums. .... 100 lbs	36.40	-
Potassium carbonate, gran., purif., 400-lb. dms., 5-dm. lots ... lb.	.40	.46
Potassium chlorate, cryst., dms., c.l., works .... lb.	.14½	-
powd., dms., c.l., works .... lb.	.30	-
purif., gran., 325-lb. dms., f.o.b. shipping point .... lb.	.40	-
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.l., f.o.b works. .... ton	105.00	-
USP cryst. dms. .... lb.	1.12	-
USP gran., dms. .... lb.	.67	-
USP powd., dms. .... lb.	.67	-
Potassium chloride, agricultural (see Potassium muriate).		
Potassium chromate, purif., cryst., dms., works. .... lb.	.57	-
Potassium citrate, NF, gran., 200-lb. dms., frt. alld .... lb.	.93½	-
Potassium cyanide, dms., 20,000-lb. lots or more, f.o.b. works. . lb.	1.32	-
Potassium dichromate (see Potassium bichromate).		
Potassium fluoborate, tech., dms., c.l., t.l., works, frt. equald. .... lb.	1.40	1.42
Potassium fluoride, anhyd., dms., t.l. .... lb.	1.68	-
Potassium gluconate, dms., t.l., f.o.b. works. .... lb.	1.45	-
Price W. of Denver 4c. per lb. higher.		
Potassium guaiacolsulfonate, 300-lb. dms., 600 lbs. or more frt. equald. .... lb.	2.10	-
Potassium hydroxide, tech. (see Potash, caustic).		
Potassium hydroxide, USP, pellets. 100-lb. dms., c.l., t.l., works, frt. equald. .... lb.	1.31	1.33
Potassium iodide, USP, gran., cryst., dms., 1,000-lb. lots divd ... lb.	10.72	12.39
ACS grade truckload ...... lb.	11.32	13.55
Potassium-magnesium sulfate, std., bgs., works. .... ton	59.00	-
basis 40% K_2SO_4 and 55% $MgSO_4$ bulk, works ..... ton	67.00	-
Potassium metabisulfite, gran., dms. t.l. .... lb.	.44	-
Potassium muriate, 60-62.4% min. K_2O, std., bulk, c.l., frt. equald., f.o.b. Sask., Canada .... ton	52.00	53.00
soluble, fine std., f.o.b. Sask. .... ton	53.50	54.50
coarse, f.o.b. Sask. .... ton	57.00	58.00
gran., f.o.b. Sask. .... ton	56.50	59.50
Potassium nitrate, fert. grade, std., 50-ton c.l., divd. SE. .... ton	267.00	274.00
prilled .... ton	277.00	284.00
tech., gran., bgs., c.l., min. 50 tons, divd. .... ton	470.00	-
Potassium oxalate, neutral, tech., fine gran., powd., 300-lb. dm., frt. equald. .... lb.	2.54	-
Potassium pentaborate, gran., bgs., c.l., works. .... lb.	1.01	-
dms., same basis. .... lb.	1.00	-
Potassium pentaborate powder 15c. per lb. higher.		
Potassium perchlorate, dms. c.l., works. .... lb.	.76	-
Potassium permanganate, free flowing, bulk, hopper trucks, works. .... lb.	1.09	-
50-kg. dms., same basis. ..... lb.	1.20	-
150-kg. dms., same basis. ..... lb.	1.17	-
Potassium permanganate, USP, 50-lb. kgs., works, c.l., t.l. ...... lb.	1.36	-
Potassium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. plant. .... cwt.	78.80	-
c/l/tl same basis .... cwt.	72.50	-
Potassium pyrophosphate tetrabasic, bgs., c.l., t.l., works, E., frt. equald. .... 100 lbs.	83.75	84.00
liquid, bulk .... 100 lbs.	46.00	49.50
Potassium salicylate, USP, gran., 200-lb. dms., 2,000 lbs. or more, works, frt. alld. .... lb.	1.52	-
USP, powd., 300-lb. dms., 2,000 lbs. or more, same basis ...... lb.	1.42	-
Potassium silicate, soln., 29.6-30.2 Be., 2.5 ratio, t.c., t.t., works. .... 100 lbs.	18.90	-
dms., c.l., t.l., works. 100 lbs.	25.90	-
Potassium silicate, 40-40.5 Be., 2.1 ratio, t.c., t.l., works. ..... 100 lbs.	25.05	-
40-40.5 Be., 2.1 ratio, dms., c.l., t.l., works. ...... 100 lbs.	32.05	-
Potassium silicate, electronics grade, 30-30.4 Be., 2.1-2.2 ratio, t.c., t.l., works .... 100 lbs.	26.10	-
dms., c.l., t.l., works. 100 lbs.	33.10	-
solid or glass, 2.15 ratio, dms., c.l., t.l., works. .... 100 lbs.	53.30	-
solid or glass, 2.5 ratio, dms, c.l., t.l., works	45.65	-
"Ratio" indicates percentage by weight of SiO_2 divided by percentage by weight of K_2O.		
Potassium silicofluoride, bgs., c.l., t.l., frt. equald. .... lb.	.11½	.15
Potassium-sodium tartrate, NF, gran. or powd., dms. .... lb.	.80	1.20
Potassium sorbate, t.l. dms., divd. lb.	2.50	3.10
Potassium stannate, dms., frt. alld.. lb.	N.A.	-
Potassium sulfate, agricultural grade, min. 50% K_2O std., bulk, c.l., f.o.b. works. .... ton	150.00	160.00
Potassium sulfate, gran., purif. 400-lb. dm. .... lb.	.88	-
Potassium tetraborate, gran., bgs., c.l. works .... lb.	1.10	-
dms., same basis .... lb.	1.15	-
Potassium tetraborate powder 15c per ton higher		
Potassium thiocyanate, USP, cryst., 225-lb dms., 5 dm. lots. lb.	4.01	-
tech., cryst., dms., t.l. .... lb.	.82	-
Potassium titanate, ctns, c.l., works .... lb.	.71¾	-
Potassium-titanium fluoride, tech., dms, t.l., works, frt. equald lb.	1.24	1.59
Potassium-zirconium fluoride, tech., dms, t.l., works, frt. equald .... lb.	.75	-
Prednisone USP dms, 5 kilos or more .... gram	1.03	-
Prednisolone acetate, USP, dms., 5 kilos or more .... gram	1.12	-
Prednisolone, anhyd. USP, dms., 5 kilos or more .... gram	1.12	-
Procaine hydrochloride, USP, antibiotic grade, dms, 2,000-lb. lots, frt. alld .... lb.	4.95	5.75
Procaine hydrochloride, USP, ampule grade, dms., 1,000-lb lots, frt. alld. .... lb	4.95	5.50
Propionaldehyde, tanks, f.o.b. ... lb.	.35½	-
Propionic acid, syn, pure, tanks, divd. E .... lb.	.33	.34½
n-Propyl acetate, tanks, divd ..... lb.	.53½	-
n-Propyl alcohol, tanks, divd. .... lb.	.42	.44
n-Propyl gallate dms., 100 to 2,000-lb. lots, divd. .... lb.	11.50	-
n-Propyl-p-hydroxybenzoate, USP, 500 kilos .... kilo	10.80	-
tech, 500 kilos, f.o.b .... kilo	10.36	-
Propyl paraben (see n-Propyl-p-hydroxybenzoate)		
Propyl thiouracil, dms, 50-kilo lots or more .... kilo.	55.00	-
n-Propylamine, dms., c.l. divd. .. lb.	.75	.80
Propylene, polymer grade, f.o.b. Tex. and La Gulf Coast points . lb.	.17¼	-
chemical grade same basis ... lb.	.15¾	.16
Propylene glycol, indust, tanks, f.o.b lb.	.40	.42
USP, tanks, f.o.b. E. .... lb.	.43	.45
Propylene glycol monomethyl ether, tanks, divd. E. .... lb.	.49	-
Propylene oxide, tanks, f.o.b. works, frt. equald .... lb.	.47½	-
Psyllium seed, USP powd bgs. ..... lb.	1.50	1.75
Pumice, dom., fine 4F-0, bgs., ton lots. .... ton	270.00	-
medium, 0½-1½, bgs., ton lots . ton	300.00	-
coarse, 2-extra coarse, bgs., ton lots. .... ton	300.00	-
Pumice, imp., Italian, fines, bgs., ton lots f.o.b. East Coast. ..... ton	280.00	-
medium, bgs., ton lots f.o.b. East Coast .... ton	350.00	-
coarse, bgs., ton lots f.o.b. East Coast .... ton	300.00	-
Pyrazolone red (red 38), dms., works. .... lb.	13.00	15.45
Pyrethrum flowers, lus grd 0.9% pyrethrins, ton lots, frt. alld.lb.	1.91	-
Pyrethrum, purif., 20% pyrethrins, dms, works .... lb.	37.50	37.75
Pyridine, refd, 2-deg, c.l., works dms. .... kilo	5.90	-
tanks .... kilo	5.70	-
Pyridoxine hydrochloride, USP, 100 kilos or more, divd ..... kilo.	36.00	-
Pyrites, Canadian 46-50% S, mines .... long ton	4.50	5.00
Pyrogallic acid (see Pyrogallol)		
Pyrogallol, 100-lb. dms., 1,000-lb. lots, divd .... lb.	13.70	15.25

Q

Quassin chips .... lb.	.57	-
Quinacridone maroon, dms., frt. alld. .... lb	27.00	35.20
ind. dms., frt. alld. .... lb	24.26	32.30
violet, dms., frt. alld .... lb	24.90	-
Quince seed, bgs .... lb.	2.00	2.75
Quinidine sulfate, USP, 1,000-oz. dms., 2,000 oz. or more... oz.	4.20	4.25
Quinine hydrochloride, NF, 1,000-oz. dms., 2,000 oz. or more.. oz.	2.45	2.50
Quinine sulfate, USP XVIII, 1,000-oz. dms., 2,000 oz. or more.. oz.	2.30	2.50
Quinoline, dms., t.l., frt. equald.... lb.	1.49	-
tanks, same basis .... lb.	1.43	-

R

R salt tech., 304 molecular wt. .... lb.	2.12	-
Racemethionine, USP, 50-250 kilos .... kilo	6.80	-
250-500 kilos .... kilo	6.60	-
500 or more kilos .... kilo	6.60	-
feed grade, 99% min., c.l., t.l. .... lb.	1.07	-
Rapeseed oil, dms. .... lb.	.58½	.60½
Rauwolfia serpentina root, powd. bls., dms. .... kilo.	22.00	-
Red carmine, No. 40 (see Carmine No. 40)		
Red precipitate, (see Mercuric oxide, red).		
Reserpine, USP, cryst., bots.... gram.	.40	.42½
Resorcinol tech., bgs., t.l. works, divd. .... lb.	3.98	-
Resorcinol, USP, cryst., dms. 50 kilos or more, works. .... kilo.	9.35	-
powd. dms., same basis .... kilo.	9.90	-
Resorcinol monoacetate, dms., 1,000 lbs. or more. .... lb.	1.96	-
Rhodamine red toner, molybdated, PMA, dms., works. .... lb.	9.26	-
tungstated, PTMA, dms., f.o.b. works. .... lb.	11.50	14.00
Rhodinol, 25-lb. cns. .... lb.	105.00	105.10
syn., dms. .... lb.	15.25	-
Rhubarb root, India, whole, bgs. ... lb.	.45	.58
powd., bgs. .... lb.	.61	.70
Riboflavin, feed grade, 25 kilos, divd. .... kilo.	34.50	-
Riboflavin, USP, 25 kilos, divd. .... kilo.	48.60	-
Riboflavin 5-phosphate-sodium, 25-kilo lots. .... kilo.	138.00	-
Rice bran oil, refined dms. t.l. ..... lb.	1.25	-
Ricinoleic acid (see Castor oil acids, split)		
Rochelle salt (see Potassium-sodium tartrate).		
Roofing pitch (see Coaltar pitch, roofing.)		
Rose oil, nat., NF, Bulgarian, otto bots. .... kilo.	5,700.00	7,500.00
Turkish, otto., bots. .... kilo.	6,500.00	-
Rosemary oil, NF, Spanish, dms. . kilo	9.00	11.00
Tunisian, dms. .... kilo	15.00	17.50
Rotenone resin, 30-45%, 100-lb. dms. works. .... unit-lb.	.21	.23

S

Saccharin NF, gran., soluble, dms. 1,000-lb. lots, frt. alld. .... lb	2.50	2.75
Saccharin NF, powd., soluble, dms., less than 20,000-lb. lots, frt alld. lb.	3.76	-
Safflower oil, non-break, tanks, N.Y... lb.	.50	-
edible dms., N.Y., divd .... lb.	.78	.80
Sage leaves, Dalmatian, No. 1, bgs. lb.	1.95	-
Albanian, bgs. .... lb	1.65	-
Turkish. .... lb.	1.25	1.30
Sage oil, Clary, French, bots. ... kilo	195.00	180.00
Dalmatian, cns. .... lb.	14.50	-
Spanish, cns. .... kilo	19.00	21.00
Salicylaldehyde, tanks, f.o.b. .... lb.	3.60	-
Salicylamide, NF, gran., powd., dms., 2,000-lb. lots, one ship. .. lb.	1.07	1.10
Salicylic acid, tech., dms., c.l., t.l., works. .... lb.	1.23	1.41
USP, cryst., dms., 1,000 lbs. or more. .... lb.	1.33	1.63
USP, powd., dms., 1,000 lbs. or more. .... lb	1.68	-
Salol (see Phenylsalicylate).		
Salt, evaporated, common, 80-lb. bgs., c.l., t.l., North, works.. 80 lbs.	4.02	-
bulk, same basis .... ton	60.00	61.20
chemical grade, same basis .. 80 lbs.	4.30	-
Salt, rock, medium, coarse, same basis. .... 80 lbs.	2.70	-
bulk, same basis .... ton	18.00	25.00
Saltcake, dom., bulk, works, 100% Na_2SO_4 basis, f.o.b. works E ton	65.00	98.00
same basis W .... ton	90.00	99.00
Sandalwood oil, E. Indian ...... kilo	165.00	-
Indonesia .... kilo	102.00	-
Sarcosine, tech., tanks, works, frt. equald. .... lb.	.50	-
Schaeffer's salt, paste, dms., 100% basis, works. .... lb.	2.59	-
Scopolamine hydrobromide, USP, 100-oz lots bots ...... oz.	36.00	46.50
Sebacic acid, CP, bgs., c.l., works.. lb.	1.95	-
purif., bgs., c.l., works. .... lb.	1.94	-
Seidlitz mixture, dms., 5,000-lb. lots. lb.	.30½	-
Selenium, powd., 99.99% Se, dms., divd. .... lb.	13.00	-
coml., 99.5% Se, same basis .... lb.	10.00	15.00
Senna leaves, Alexandria, whole and half, bls. .... lb.	.75	.80
Tinnevelly, No. 1, bls. .... lb.	.70	.71
powd., bbls., bxs. .... lb.	.90	1.10
Sesame oil, USP, dms., t.c.l. .... lb.	1.00	1.20
Sesame seed, Central American, hulled, bgs. .... lb.	.55	.56
Sienna pigment, burnt, paper bgs., t.c.l., works. .... lb.	.19½	.28½
raw, paper bgs., t.c.l., works ..... lb.	.16¼	.23¾
Silica, amorph. dry-grd., bgs., c.l., works 93%, 200 mesh. ..... ton	31.00	32.50
98%, 200 mesh. .... ton	32.00	33.50
93%, 97%, 325 mesh. .... ton	34.50	35.50
98.5%, 325 mesh. .... ton	37.00	-
98.5%, 325 mesh. .... ton	51.50	54.50
Silica, dry-grd., bgs., c.l., works, 99.9%, 400 mesh, micronized. .... ton	72.00	75.50
99% under 15 microns, micronized. .... ton	79.50	82.60
99% under 10 microns, micronized. .... ton	104.00	105.00
Silica, hard-quartz, 99.5% SiO_2, 325 mesh, bgs., c.l., works... ton	57.00	-
140 mesh, bgs., c.l., works.. ton	34.75	-
Silicon tetrachloride, tech., dms., c.l., works. .... lb.	.50	-
tanks, works. .... lb.	.36	-
Silver bullion, ingots, cs., Troy.... oz.	5.36	-
Silver cyanide, 80% Ag. 500-oz. lots oz.	4.29	-
Silver nitrate, ACS, 58.2 Troy oz. AG/ 100 avoir. oz. $AgNO_3$ .... oz.	3.2088	-
Soapbark, crushed, bls. .... lb.	1.00	-
powd., bls. .... lb.	1.35	1.96
Soda ash, dense, 58%, 100-lb., paper bgs. c.l., works, f.o.b. ... ton	120.00	-
bulk, c.l., same basis .... ton	83.00	-
light 58%, 100-lb., paper bgs., c.l., same basis. .... ton	150.00	-
bulk, c.l., same basis .... ton	123.00	-
Soda, caustic, liq., 60%, sellers tanks, Gulf Coast works, f.o.b., frt. equal., 76% Na_2O .... ton.	175.00	195.00
73%, same basis. .... ton.	205.00	226.00
flake, 76%, 400-lb. dms, c.l. works .. ton	500.00	570.00
solid, 76%, 700-lb. dms. c.l. works. .... ton.	520.00	570.00
gran., 75%, 450-lb. dms. c.l. works. .... ton.	520.00	-
beads, 76%, 400-lb. dms., c.l., works. .... 100 lbs.	27.50	28.50
Prices for liq. rayon-type, $16 ton higher. Prices in West 70c. higher for solid, and $20-$30 ton higher for gran. and beads.		
Soda, sal., conc., bgs., c.l. works. .... 100 lbs.	3.35	3.85
Sodium acetate, anhyd., bgs., c.l., f.o.b. works. .... lb.	.54	-
Sodium acetate, USP, 60%, gran. 100-lb. dms., c.l., works .... lb.	.57	-
Sodium alginate, NF, white powd., dom., 300 lbs. or more.... lb.	8.00	8.76
Sodium p-aminosalicylate, dms., 100-lb. lots or more, f.o.b. works. .... lb.	4.73	-
Sodium antimonate, bgs., c.l., divd E. lb.	1.49	1.50
Sodium ascorbate, USP, dms., 100 kilos. .... kilo.	9.30	10.50
Sodium benzoate, tech., bgs., c.l., t.l., frt. alld. .... lb.	.70½	-
Sodium benzoate, USP, 50-lb. bgs., c.l., t.l., frt. alld. .... lb.	.83½	-
ton-lots, same basis .... lb.	.86½	-
100-lb. dms., c.l., t.l., same basis. lb.	.89	-
ton-lots, same basis .... lb.	.82	-
Sodium bicarbonate, USP, powd., reg. grade, bgs., c.l., t.l., works, frt. equald. .... 100 lbs.	17.05	-
coarse, same basis ...... 100 lbs.	18.05	-
fine, same basis .... 100 lbs	17.20	-
gran., same basis. ...... 100 lbs	17.85	-
gran., fine, same basis .... 100 lbs.	17.80	-
Sodium bichromate, gran., bgs. c.l. t.l., works, frt. equald. ...... lb.	.57	-
Sodium bifluoride, 400-lb. dms., c.l., frt. equald. .... lb.	.79	-
100-lb. bgs., c.l., same basis. ... lb.	.78	-
Sodium bisulfate, bulk, c.l., works ... ton	175.00	-
dms., c.l., ... 100 lbs.	13.00	-
Sodium bisulfite, anhyd. bgs., c.l., t.l., works, East. .... 100 lbs.	28.50	-
works, West .... 100 lbs.	32.00	-
Sodium bisulfite, soln., 38%, bulk, 100% basis, works, East .... 100 lbs.	20.60	-
soln., 100%, bulk, works, West 100 lbs	20.00	-
photographic grade, 43% soln., works. .... 100 lbs.	21.90	-
Sodium borate NF, gran., bgs., c.l., works. .... lb	.61	-
powd., same basis. .... lb.	.52	-
Sodium borohydride, powd., dms., 1000-5000 lbs. works.... lb.	19.88	21.90
Sodium borohydride, stabilized water soln., 12% $NaBH_4$, 100% basis, 3000 gal tankwagon, works lb.	17.45	-
Sodium bromide, 96%, gran., 400-lb. dms., f.o.b. works. .... lb.	1.04	-
Sodium carbonate, decahydrate, bgs, c.l., t.l., works. .... ton.	264.00	-
Sodium carbonate, cryst. monohydrate (see Soda, ash)		
Sodium carbonate, monohydrated, bgs., c.l., t.l., works. .... ton	392.00	-
Sodium carboxymethyl cellulose (see CMC.)		
Sodium chlorate, crystal, bulk, t.c., t.l., delivered, N.E. .... ton	330.00	-
delivered, S.E. .... ton	335.00	-
Sodium chlorate, cryst., 450-lb. dms., c.l., works. E. .... lb.	.27	-
Sodium chloride, tech. (see Salt.)		
Sodium chloride, USP, gran., bgs.. lb.	.29	-
Sodium chlorite, tech., dms., c.l., works. .... lb.	1.17	1.27
Sodium chromate, anhyd., dms., c.l., t.l., works. .... lb.	.67	-
Sodium chromate, tetrahydrate, bgs., c.l., t.l., works .... lb.	.64	-
Sodium citrate, gran., anhyd., 200-lb. dms. c.l., t.l., N.Y. .... lb.	1.95	-
Sodium citrate, USP, gran., dihydrate. 100-lb. bgs., t.l., f.o.b. shipping point. .... lb.	.74½	-
Sodium cyanate, dms. 1,000-lb. lots. works. .... lb.	.85	-
Sodium cyanide, briquettes or gran., 98% min., 200-lb. dms, min., divd. .... lb	.71	-
Sodium diacetate, anhyd., dms., c.l., works. .... lb.	.68	-
Sodium diacetate, FCC, 50-lb. bgs., t.l., divd. E. of Rockies .... lb.	.81	.67
Sodium diacetate, tech., 60-lb. dms., c.l., works .... lb.	.52	-
Sodium erythorbate, powd., gran., t.l. or mixed t.l., f.o.b. shipping point. .... lb.	2.60	2.85
Prices W. of Denver 2c. per pound higher.		
Sodium ferrocyanide, bgs., t.l., works. .... lb	.80	-
Sodium fluoborate, tech., gran., dms., t.l., works, frt. equald. ...... lb.	1.77	-
Sodium fluoride, white, 97%, 400-lb. dms., c.l., works, frt. equald.. lb.	.6345	-
100 bgs., c.l., same basis. ... lb.	.60	-
USP powd., 200-lb. dms., t.l., f.o.b. shipping point ...... lb.	4.69	-
Sodium formate, bgs., c.l., works .. lb.	.20	-
Sodium gluconate, tech., 50-lb. bgs., 2,500 lbs. or more frt. alld. . lb.	.80	-
Sodium hydride, oil dispersion, 60% NaH, 167-lb. dms., 10 dms., works. .... lb.	1.86	-
Sodium hydrosulfide. (see Sodium sulfhydrate.)		
Sodium hydrosulfite, dms., c.l., t.l., f.o.b. shipping point E .... lb.	.84	-
Sodium hydroxide, USP, pellets, 100-lb. dms., c.l., t.l., works, frt. equald. .... lb.	.98	1.06
Sodium hydroxide, tech. (see Soda, caustic.)		
Sodium hypophosphite, EN grade, 300 lb. dms f.o.b. works ...... lb.	1.425	1.50
110 lb. dms.	1.47	1.52
Sodium hyposulfite (see Sodium thiosulfate).		
Sodium iodide, USP, cryst., 300- to 500-lb. lots. dms. frt. equald. .... lb.	14.72	-
Sodium lauryl sulfate, 30%, tanks, f.o.b. works .... lb.	.29	.32
Sodium lignin sulfonate, bgs., c.l., works. .... 100 lbs.	25.60	-
Sodium metabisulfite (see Sodium bisulfite).		
Sodium metaborate, octahydrate, gran., bgs., c.l., works .... lb.	.38	-
tetrahydrate, gran, bgs. c.l., works. .... lb.	.49	-
Sodium, metallic, 12-lb. bricks, dms., c.l. works .... lb.	.93	-
fused, dms. 24,000-lb. lots or more, works. .... lb.	.87	-
tanks, works .... lb.	.70	.80
Sodium metaphosphate, tech. bgs., c.l., f.o.b. shipping pt. frt. equald. .... 100 lbs.	61.60	-
food grade, bgs. c.l. f.o.b. frt. equald. .... 100 lbs.	68.26	-
Sodium metasilicate, anhyd., bgs., c.l. works .... 100 lbs.	27.25	-
bulk, c.l., works .... 100 lbs.	25.30	-
pentahydrate, bgs., c.l., f.o.b. shipping point. .... 100 lbs.	18.85	-
bulk, c.l. works .... 100 lbs.	17.20	-
Sodium molybdate, anhyd., dms. f.o.b. works, 100 lbs and over... lb.	4.87	-
cryst., dms., t.l., same basis .... lb.	4.12	-
Sodium naphthionate, dms., c.l., t.l., f.o.b. works. .... lb.	2.00	-
Sodium Nitrate, USP, bgs., c.l., f.o.b. frt. equald. .... 100 lbs.	34.50	-
Sodium nitrate, dom., industrial, bgs., c.l., works. .... ton	284.00	292.00
bulk, c.l., works .... ton	250.00	-
imp., coml., 100-lb. bgs., c.l., Atl., or Gulf whse. .... ton	205.00	214.00
bulk, c.l., same basis .... ton	182.00	-
imp., agricultural, bulk, c.l., same basis. .... ton	140.00	-
Sodium nitrite, USP, dms., c.l., works, frt. equald. .... 100 lbs.	37.25	-
Sodium orthosilicate, tech., anhyd., bgs., c.l., works ..... 100 lbs.	34.50	-
Sodium orthosilicate, tech., hydrated, flake, dms., c.l., works. 100 lbs.	27.45	-
bgs., c.l., works. ...... 100 lbs	28.25	-
Sodium oxalate, 99%, bgs., t.l., works, lb.	.45	-
Sodium pentachlorophenate, beads c.l., 30,000-lb min. .... lb.	.67	-
bgs. .... lb.	.68	-
Sodium pentobarbital (see Pentobarbital-sodium).		
Sodium perborate, tetrahydrate, tech., bgs., c.l., t.l., works. ..... lb.	.32½	.36½
Sodium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. plant .... lb.	.63½	-
55-lb. bgs. same basis. .... lb.	.62	-
Sodium phenobarbital (see Phenobarbital-Sodium).		
Sodium phenosulfonate, powd., dms., lb.	.78	-
Sodium phosphate, anhyd., dibasic tech., bgs., c.l., t.l., works, frt. equald. .... 100 lbs.	54.50	-
food grade, same basis 100 lbs.	57.50	-
Sodium phosphate, monobasic, tech., same basis. .... 100 lbs	55.75	-
food grade, same basis. 100 lbs.	59.75	-
tribasic, tech., same basis. 100 lbs.	52.25	52.75
food grade, same basis. 100 lbs.	63.25	-
chlorinated, same basis. 100 lbs.	51.50	-
cryst., tech., same basis. 100 lbs.	30.50	-
cryst., food grade, same basis. .... 100 lbs	35.60	-
USP, dried, powd., bgs., dms., works. .... lb.	.18	.20½
Sodium picramate, tech., paste, 200-lb. dms., dry basis, divd. ... lb	5.50	-
Sodium propionate, dms., 2,000 lbs or more, f.o.b. frt. alld .... lb	.54	-
Sodium pyrophosphate, acid, tech., bgs., c.l., works, frt. equald. . 100 lbs.	58.25	-
food grade, non-leavening, bgs., c.l., works. frt. equald .. 100 lbs.	61.25	-
Sodium pyrophosphate, ferric, dms., c.l., t.l., works. .... lb	.3880	-
Sodium pyrophosphate, tetrabasic, anhyd., tech, bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	44.75	-
bulk, hopper cars, same basis. .... 100 lbs.	42.50	-
food grade, bgs, c.l., t.l., same basis. .... 100 lbs.	53.00	-
Sodium salicylate, USP, cryst., 200-lb. dms., 1,000-lb lots or more, works, frt. equald. .... lb.	3.00	-
USP, powd., 200-lb. dms., 1,000-lb. lots or more, same basis .. lb	3.05	-
Sodium sesquicarbonate, bulk, c.l., t.l., works .... ton	170.00	-
bgs, c.l., t.l. works .... 100 lbs	198.00	-
Sodium silicate, solid, or glass, 3.22-3.25 ratio, bulk, c.l., t.l., works. .... 100 lbs.	15.70	-
bgs., c.l., t.l., works ... 100 lbs.	27.75	-
1.95-2.00 ratio, bulk, c.l., t.l., works. .... 100 lbs.	20.30	-
bgs., c.l., t.l., works .... 100 lbs.	22.15	-
soln., 37.6° solid, 3.22-3.25 ratio, bulk, c.l., t.l., frt. equald .... 100 lb	6.30	-
"Ratio" indicates percentage by weight of SiO_2 divided by percentage by weight of Na_2O		
Sodium silicofluoride, bgs., c.l., t.l., works, frt. equald .... 100 lbs.	17.95	19.75
Sodium stannate, dms. wks. frt. alld E lb	N.A.	-
Sodium sulfanilate, dms, works .. lb	22	-
Sodium sulfate, NF XII, powd., dms., 2,000-lb. lots .... lb	.23½	-
tech., detergent, rayon-grade, c.l., works, Gulf. .... ton	90.00	96.00
Sodium sulfate, West, bulk, c.l., works, frt. equald. .... ton	90.00	101.00
bulk, c.l., East, same basis ... ton	113.00	114.00
Sodium sulfate, photo grade, 100-lb bgs., c.l., works. .... ton	47.00	53.00
Sodium sulfhydrate, flake, 70-72%, dms., c.l., works, frt. equald. .... ton	500.00	-
liq., 44-46%, tanks, works, frt. equald. .... ton	500.00	-
Sodium sulfide, flake, dms., c.l., works, E., frt. equald. .... ton	470.00	-
bgs., same basis .... ton	410.00	-
Sodium sulfide, fused, dms., c.l., works, E., frt. equald. ...... ton	240.00	-
Sodium sulfite, anhyd., tech. 95-100% bgs, f.o.b. works .... 100 lbs.	23.76	-
Sodium sulfocyanide CP (see Sodium thiocyanate).		
Sodium tetraborate (see Borax).		
Sodium tetrasulfide, liq. 34%, dms., c.l., works, frt. equald. .. ton	540.00	-
Sodium thiocyanate, purif., cryst., 250-lb. dms., 5 dms. or more f.o.b. works .... lb.	3.28	-
tech., anhyd. dms., 2,000 lbs. or more, works. .... lb.	.97	-
Sodium thiosulfate, tech., photo-grade, anhyd., 100-lb. bgs., c.l., t.l., works, frt equald ..... 100 lbs.	45.50	-
cryst. pentahydrate, c.l., t.l., same basis. .... 100 lbs.	28.50	-
Sodium titanate, dms., c.l., works. . lb.	.14¼	-
Sodium trichloroacetate, 95%, 50-lb. bgs., c.l., frt. alld. E. .... lb	.28	-
Sodium tripolyphosphate, tech., bgs., c.l., t.l. works, frt. equald. . 100 lbs.	39.75	-
bulk, hopper cars, same basis. 100 lbs.	37.50	-
food grade, bgs., c.l., t.l., same basis. .... 100 lbs.	48.50	-
Sodium tungstate, tech. high moly., dms., 10,800 lbs. or more, frt. alld. .... lb.	5.00	5.50
Folin grade dms., 10,800 lbs. or more, same basis. ... lb.	8.00	-
Sodium-ammonium phosphate, purif., cryst., dms., works. .... lb.	.52	-
Sodium-formaldehyde sulfoxylate, dms., t.l., f.o.b. works. ...... lb.	.91	-
Sodium-zirconyl sulfate, dms., 1,000-lb. lots or more, works. .... lb	.28	-
tech., dms., any quantity, works . lb.	.18	-
Solvent naphtha, petroleum, straight aromatic, b.r. 320°-350°F, 58°F m.a.p., tanks:		
New Jersey .... gal.	1.52	-
Houston .... gal.	1.41	-
Illinois .... gal.	1.54	-
Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.a.p., tanks:		
New Jersey .... gal.	1.30	1.35
Houston .... gal.	1.30	-
Illinois .... gal	1.30	1.35
Sorbic acid, t.l. dms., divd. .... lb.	2.50	3.10

CHEMICAL PRICES

WEEK ENDING DEC. 26, 1986

Sorbitan monostearate, dms., c.l., t.l., 30,000 lb. min., f.o.b works. .... lb.	.76	-
Sorbitan tristearate, c.l., t.l., 30,000 lb. min., f.o.b. works. .... lb.	80	-
Sorbitol, USP, reg. 70% aqueous, dms., c.l., f.o.b. shipping point .... lb	.35	-
tanks, f.o.b. shipping point . lb.	30	-
gran, dms, c.l., t.l., works .... lb.	70	74
powd., dms, c.l., t.l., works .... lb.	.68	.72
Soybean meal (See Oils, Fats & Waxes market report.)		
Soybean oil (See Oils, Fats & Waxes market report.)		
Soybean oil acidulated, soapstock, 95% acid, tanks, New York lb.	.14	15
Soybean oil, acid, dist., dist., dms. . lb.	48	.59
tanks .... lb.	43	.44
s.d., dms. .... lb.	.47	58
tanks .... lb	.38	.43
Spearmint leaves, imp. bls. ...... lb.	2.50	2.70
Spearmint oil, Chinese, 60% ..... lb	5.50	-
Chinese, 80% .... lb	8.00	-
Far West, native .... lb.	8.50	-
Far West, Scotch .... lb.	18.50	-
Spruce oil, dms. .... lb.	8.00	-
St. John's bread, edible, bls. ..... lb.	.29	30
Stannic chloride, anhyd., dms., works. .... lb	N.A.	-
Stannic oxide, dms., works. .... lb	N.A.	-
Stannous chloride, anhyd., dms., wks lb	N.A.	-
Stannous fluoborate, liq., conc., dms., t.l., works, frt. equald .... lb	2.50	-
Stannous oxide, dms, works ..... lb	N.A.	-
Stannous sulfate, dms, works ..... lb	N.A.	-
Stearic acid, double pressed, bulk .. lb	26	39
single-pressed, bulk .... lb	28	375
triple-pressed, bulk .... lb	32	.40
Stramonium leaves, bgs .... lb	15	20
Streptomycin sulfate, USP, bulk .. kilo	47.00	-
Strontium carbonate, glass grd., bgs., t.l., works .... lb	37½	-
Strontium nitrate, 50-15 bgs., c.l., works .... 100 lbs	51.50	-
Styrene monomer, 99.6% min., t.c., t.t., f.o.b. works .... lb	23	27
Styrene-acrylonitrile resin, nat., bulk f.o.b. plant .... lb	77	-
cryst., bulk, same basis .... lb	77	81
clear, same basis .... lb.	77	81
Styrol acetate, dms .... lb	2.35	-
Succinic acid, purif., cryst., dms., t.l., frt. alld. .... lb	2.00	2.10
Succinic anhydride, dms., c.l., t.l., f.o.b. works .... lb	1.71	-
Sucrose, refd., white, bgs., c.l., f.o.b refy E .... 100 lbs	33.10	-
Sucrose acetate, isobutyrate, 90%, dms., t.l., divd .... lb	1.18	-
tanks, divd. .... lb	1.10	-
100%, dms, t.l., divd. .... lb	1.18	-
Sucrose octa-acetate, denaturing grade, 100-lb. dms., f.o.b works .... kilo	12.50	13.50
Sulfabenzamide, dms., 500 kilos kilo	39.50	-
Sulfabenzamide-sodium, dms., 500 kilos .... kilo	25.00	-
Sulfacetamide, USP, dms., 500 kilos. .... kilo	20.00	23.50
Sulfadiazine, USP, powd., dms., 500 kilos. .... kilo	53.00	-
Sulfadiazine-sodium, USP, dms., 500 kilos. .... kilo	40.70	-
Sulfamerazine, USP, microcrystals, dms., 500 kilos. .... kilo	33.50	-
USP, powd., dms., 500 kilos.... kilo	32.00	-
Sulfamethazine-sodium, USP, powd dms., 50 kilos .... kilo	13.00	-
Sulfamethazine, powder, dms., 500 kilos. .... kilo.	9.00	10.00
Sulfamic acid, cryst., bgs., c.l., t.l., works .... 100 lbs.	38.00	41.00
Sulfamic acid, gran., dms., c.l., t.l., works. .... lb	.36	-
Sulfanilamide, NF, reg. 1,000-lb. dms., frt. equald. .... lb.	2.00	-
Sulfanilic acid, tech., bgs., t.l., f.o.b works .... lb.	.67½	-
Sulfaquinoxaline, veterinary, grade, dms. .... lb.	8.00	-
Sulfur, crude, bright, molten, dom., f.o.b vessels, Gulfports ...... long-ton	118.00	120.00
f.o.b. La. refy .... long-ton	120.00	122.00
recovered, divd., Houston long-ton	120.00	122.00
ex terminal, Rotterdam .. long-ton	135.00	-
f.o.b. tanks, Alberta, Canada, for US delivery .... long-ton	80.00	85.00
dark, ex-Tampa, Fla. ...... long-ton	152.50	-
Tampa price subject to $10 per long-ton discount for most customers.		
Sulfur, crude, 99.5% min. purity, coml flour, 50-lb. bgs., c.t., mines basis .... 100 lbs	13.60	-
lump, same basis .... 100 lbs.	13.60	-
Sulfur, refd., 99.5% min. purity, rolls 50-lb. bags, c.l., mines basis .... 100 lbs.	17.50	-
flour, light, 50-lb. bgs., same basis .... 100 lbs.	20.00	-
Sulfur, refd., sublimed, NF, 99.85% min. purity, 50-lb bgs., c.l. mines basis .... 100 lbs.	28.00	-
Sulfur, rubbermakers, 99.5% min. purity, coml., reg., 60-lb. bgs., c.l., mines basis ..... 100 lbs.	14.60	-
fine, 86% min. passing through 325 mesh, same basis .. 100 lbs.	15.60	-
Sulfur dichloride, dms., c.l., works, frt. equald. .... lb.	.24	-
tanks, same basis .... lb.	.17¾	-
Sulfur dioxide, liq., bulk, t.c., t.l., f.o.b. works. .... ton	230.00	-
Sulfur monochloride, dms., c.l., works, frt. equald .... lb.	.22½	-
tanks, same basis .... lb.	.16¼	-

CHEMICAL PRICES

WEEK ENDING DEC. 26, 1986

Sulfuric acid, virgin 100% tanks, works,		
East Coast ... ton	71.75	95.90
Gulf Coast ... ton	75.00	88.49
Midwest ... ton	60.25	–
Southeast ... ton	68.15	–
West Coast ... ton	65.00	–
NOTE: For prices on 60 and 66 Bs., multiply by .7767 and .9318, respectively. For price of 20% fuming oleum, as is, add $3-$4 to above prices and multiply by 1.045.		
Sulfuric acid, smelter, 100% tanks, works,		
Gulf Coast ... ton	46.00	52.00
New Mexico ... ton	20.00	25.00
Southeast ... ton	63.15	–
93%, tanks, dlvd., Northwest ton	60.00	65.00
Sunflowerseed oil, crude, f.o.b. Minneapolis ... lb.	.14½	.15
Superphosphate, triple, 46% or more, a.p.a., run-of-pile, bulk, c.l., Fla. ... unit-ton	2.75	3.05
bulk, gran., c.l., Fla. ... ton	160.00	165.00

T

Talc, dom., grd. New York bgs., c.l., works ... ton	64.00	–
99.5%, 325 mesh, bgs., c.l., works ... ton	64.00	60.00
Talc, dom., 86.5%, 400 mesh, micronized, bgs., c.l., works ... ton	187.00	236.00
525 mesh, micronized, bgs., c.l., works ... ton	200.00	–
dom., ord., Calif. grd., bgs., c.l., works ... ton	90.00	–
ord., Vermont, off-color grd., bgs., c.l., works ... ton	136.00	–
Imp., Canadian, grd., bgs., c.l., works ... ton	70.00	64.00
Tall oil, crude, Southeast, tanks, works, frt. equald. ... ton	60.00	100.00
Tall oil, rafd., acid, same basis ... lb.	.31	–
dist., tanks, same basis ... lb.	.18	.23
Tall oil acids, 2% or more rosin, tanks, works, frt. equald. ... lb.	.20½	.23½
less than 2% rosin acid ... lb.	.22	.27
Tallow (see Oils, Fats & Waxes market report.)		
Tallow, fatty acids, tech., non-ref. dms., c.l., dlvd. ... lb.	.37	.40
tanks, dlvd. ... lb.	.28	.45
hydrogenated, tech., flake, bgs., c.l., dlvd. ... lb.	.37	.33
tanks, dlvd. ... lb.	.35	.42
Tangerine oil, Fla., dms. f.o.b. ... lb.	6.50	8.50
Italian, dms ... kilo	52.80	–
Tankage, animal feeding, 9-11%, NH_3, New York, bulk ... unit-ton	5.50	–
Tankage, fert. grade (see Nitrogenous process tankage).		
Tannic acid, NF, fluffy, bbls., 1,000-lb. lots ... lb.	6.09	–
tech., powd., dms. ... lb.	4.62	–
Tar acid oil, 15-16% t.l., dms., f.o.b works ... gal.	1.40	–
25-28%, t.l., dms., f.o.b. works ... gal.	1.59	–
50-53%, t.l., dms., f.o.b. works ... gal.	1.67	–
Tartaric acid, NF, bgs. ... lb.	1.20	1.50
Tellurium, metallurgical, f.o.b. works lb.	12.00	–
Terpin hydrate, NF, imp., cryst., powd., 35 kilo drums, f.o.b. ship. pt., frt. equald. ... lb.	1.35	–
Terpineol ... lb.	1.19	1.50
Terpinyl acetate, extra, dms ... lb.	2.40	–
prime, dms ... lb.	1.35	2.05
Terpinyl propionate, dms. ... lb.	4.50	–
Tetrachloroethylene, tech. (see Perchloroethylene).		
Tetrachloroethylene, USP, dms., c.l., t.l., works ... lb.	.30¼	–
Tetraethyl orthosilicate, bulk, f.o.b. works ... lb.	1.53	1.66
Tetraethylene glycol, tanks, frt. alld. lb.	.67	–
Tetraethylene glycol diacrylate, t.f. dms., f.o.b. works ... lb.	1.50	–
Tetraethylenepentamine, tanks, same basis ... lb.	1.70	1.75
Tetraethylthiuram disulfide, tech., flake, dms., t.l., frt. alld. ... lb.	.66	2.07
Tetrahydrofuran dms., c.l., t.l., f.o.b. works ... lb.	1.02	–
tanks, same basis ... lb.	.66	–
Tetrahydrofurfuryl alcohol tanks, f.o.b. Memphis, Tenn. ... lb.	.90	–
Tetrahydrolinalool, syn., dms. ... lb.	7.20	–
Tetrahydrophthalic anhydride dms., c.l., t.l. f.o.b. works ... lb.	.65	–
Tetrapotassium phosphate (see Potassium phosphate, tetrabasic).		
Tetrasodium pyrophosphate (see Sodium pyrophosphate, tetrabasic.)		
Thallium metal, dlvd. ... lb.	35.00	–
Thallium sulfate, 99%, bots., dlvd. kilo	140.00	–
Theobromine, bulk f.o.b. works ... kilo	140.00	150.00
Theophylline, USP, anhyd. 50-kilo dms., 10,000-kilo lots ... kilo	12.90	12.85
Thiamine hydrochloride, USP 100-kilo dms., dlvd. ... kilo	33.00	–
Thiamine mononitrate, USP, 100-kilo., dms., dlvd. ... kilo	33.00	–
Thiodiphenol, 98%, dms., f.o.b. works ... lb.	3.35	–
Thioflavin green toners, molybdated, PMA, dms ... lb.	5.40	8.05
tungstated, PTA, dms. ... lb.	5.60	5.85
Thioglycolic acid, rafd., dms., ton lots 100% acid basis ... lb.	2.07	–
Thioindigoid maroon, dms., frt. alld. lb.	7.50	–
reds, dms., frt. alld. ... lb.	5.86	6.12
Thionyl chloride, high-purity, 99.6%, 24,000-lb. min. t.l., dms. frt. equald. ... lb.	.55	–
Thorium nitrate, purif., dms., 100-lb. lots or more, works ... lb.	2.75	–
dl-Threonine, dms 10 kilos wks ... kilo.	126.00	–
Thyme leaves, French, bgs. ... lb.	1.45	–
Spanish, bgs. ... lb.	.75	–
Thyme oil, NF, red, dms. ... kilo	20.00	–
NF, white, dms. ... kilo	22.00	–
Thymol, NF ... lb.	3.75	6.15
Thymol iodide, dms., 100-lbs. f.o.b. works ... lb.	52.30	56.20
Tin metal (NY composite) ... lb.	N.A.	–
Titanium dioxide, anatase, bgs., 20-ton lots, frt. alld. ... lb.	.77	.79
slurry shipments, 50-ton lots, dry basis, frt. alld. ... lb.	.76	–
Titanium dioxide, rutile, reg., bgs., 20-ton lots, frt. alld. ... lb.	.81	.84
slurry shipments, 50 ton lots, dry basis, frt. alld. ... lb.	.84	–
Non-chalking rutile material costs 1c. per pound more.		
Titanium hydride powd. electronics grade, dms. ... lb.	26.50	–
Titanium tetrachloride, tech., bulk, c.l., f.o.b. works ... lb.	.30	.35
200-gal cylinders c.l., same basis lb.	.50	–
Titanium sponge, 99.3%, fiber drums, less than 5,000 lbs. f.o.b. wks ... lb.	4.85	–
Tobias acid, 2,000 lbs. or more ... lb.	2.45	–
d-a-Tocopherols, 67%, dms ... kilo	50.06	–
d-a-Tocopheryl acetate, 61% conc., dms ... kilo	57.48	–
d-a-Tocopheryl acid succinate, cryst., dms ... kilo	76.44	–
dl-a-Tocopherol, dms ... kilo.	27.40	–
dl-a-Tocopheryl acetate, USP 50-kilo dm. 1000 kilo min. ... kilo.	16.00	16.60
50% dry powd., 50-kilo dm. ... kilo	17.00	–
Tolu balsam, cns. ... lb.	7.60	8.68
Toluene, petroleum, ind. or nitration, tanks		
Atlanta, Ga., dlvd. ... gal.	.70	–
Bayonne, N.J., dlvd. ... gal.	.70	–
Baytown, Tex., f.o.b. ... gal.	.70	–
Chicago, Ill. dlvd. ... gal.	.70	–
Clairton, Pa., f.o.b. ... gal.	.70	–
Deer Park, Tex., f.o.b. ... gal.	.70	–
Ft. Wayne, Ind., dlvd. ... gal.	.70	–
Gulf Coast, spot, barges ... gal.	.76	–
Houston, Tex., dlvd. ... gal.	.70	–
New Jersey Metro, dlvd ... gal.	.70	–
Philadelphia, Pa., dlvd. ... gal.	.70	–
Providence, R.I., dlvd. ... gal.	.70	–
Toluene di-isocyanate (mixed isomers), 80%, 2,4- and 20% 2,6-isomers, jumbo tankcars, dlvd. ... lb.	1.01	–
p-Toluenesulfonamide, powd., dms., t.l., works ... lb.	3.55	–
m-Toluidine, tech., bulk ... lb.	3.10	–
o-Toluidine, tech., liq., dms. c.l. ... lb.	.72	.75
bulk, same basis ... lb.	.60	.64
p-Toluidine, tech. cast solid, dms., cl., works ... lb.	1.60	1.85
Liq., tanks, same basis ... lb.	1.70	–
flakes, same basis ... lb.	1.95	–
Toluidines, mixed, o-m-p, tech., liquid, c.l. f.o.b. works ... lb.	1.03	–
bulk same basis ... lb.	.95	–
Tolyltriazole, dms., 1,000-lb. lots, f.o.b. Cincinnati, Ohio ... lb.	2.90	–
Tonka beans, Angostura, prime, 1,000-lb. lots ... lb.	8.50	–
Toxaphene, dms., c.l., t.l., works ... lb.	.36	–
Tragacanth gum, No. 1, ribbons, cns. lb.	36.00	40.00
flaked powder ... lb.	12.50	15.00
Triacetin tanks, dlvd. E ... lb.	.75	–
Tributyl citrate, t.l., drums, f.o.b., works ... lb.	1.70	–
Tributyl phosphate, tanks, works ... lb.	1.55	1.77
Tributylamine, dms., c.l., dlvd. ... lb.	1.38	–
tanks, same basis ... lb.	1.33	–
Trichloroacetic acid, tech., 300-lb. dms., c.l., f.o.b., works ... lb.	.94	–
USP, 100-lb. dms., frt. equald. ... lb.	.99½	–
1,2,4-Trichlorobenzene, pure, tanks, dlvd. ... lb.	.61½	–
1,1,1-Trichloroethane, tanks, consumers, dlvd. ... lb.	.40½	–
1,1,2-Trichloroethane, tanks, f.o.b. works ... lb.	.42	–
Trichloroethylene, tanks, dlvd. ... lb.	.36½	–
Trichloroisocyanuric acid, dms. ... lb.	1.25	–
Trichlorophenoxyacetic acid (see 2,4,5-T).		
Tricholine citrate, 65%, soln., non-ret. dms., 1,500-lb. lots, dlvd. ... lb.	1.35	–
Tricresyl phosphate, tanks, f.o.b. works ... lb.	1.60	1.76
Tridecyl alcohol, mixed isomers, tanks, dlvd. ... lb.	.57	–
Triethanolamine, 85%, tanks, dlvd. E. ... lb.	.35	.37
99%, tanks, same basis ... lb.	.35	.37
Triethanolamine lauryl sulfate, tanks, f.o.b. works ... lb.	.27¼	.27½
Triethylamine, dms., c.l., dlvd. ... lb.	1.33	–
tanks, same basis ... lb.	1.20	–
Triethyl citrate, t.l., drums, f.o.b. works ... lb.	1.62	–
Triethyl phosphate, tanks, dlvd. ... lb.	1.15	–
Triethylene glycol, tanks, f.o.b. Gulf lb.	.47	–
Triethylene glycol dipelargonate, tanks f.o.b. works ... lb.	.28½	–
40-60% tanks, 100% basis, frt. equald. ... lb.	.35	–
Triethylenetetramine tanks, frt. equald. lb.	1.43	1.45
Tri-iso-tolyl trimellitate, f.o.b. works lb.	.51	.55
Tri-isobutylene, tanks, dlvd. ... lb.	.45	–
Tri-isopropanolamine, dms., c.l., frt. alld. E. ... lb.	.57½	–
Trimethylamine, anhyd., tanks, frt. equald., 100% ... lb.	.54½	–
25% soln., tanks, frt. equald., 100% basis ... lb.	.63½	–
40% soln., tanks, frt. equald., 100% basis ... lb.	.56½	.57
Trimethylolpropane bgs c.l. t.l. dlvd. lb.	.76	–
Trimethylolpropane triacrylate, t.l. dms., f.o.b. works ... lb.	1.50	–
Tripentaerythritol, tanks, frt. alld., E. lb.	1.00	–
Triphenyl phosphate, dms., t.l., frt. equald. ... lb.	1.64	.78
Tripropylene glycol tanks, f.o.b. ... lb.	.64	.68
Tris-(hydromethyl) nitromethane, solid, t.l. works ... lb.	.605	–
Trisodium phosphate (see Sodium phosphate, tribasic)		
l-Tryptophan, dms, 25-kilo lots ... kilo.	62.00	65.00
Tung oil, tanks, imp. New York ... lb.	.31	.33
Tungstic acid 92½%, dms., 1,750-6,000 lbs., works ... lb.	12.65	–
Turmeric, Alleppey 5% ... lb.	.63	–
Turmeric, Alleppey over 6% ... lb.	.67	–
Turpentine, crude sulfate tanks, f.o.b. Southeast works ... gal.	.90	1.00

U

Ultramarine blue pigments, 550-2,000 lb.-lots, works ... lb.	1.30	–
violet, same basis ... lb.	2.20	–
Umber pigment, burnt, American, frt. equald. ... lb.	.13½	.15½
raw, American, dom., bgs., l.c.l., same basis ... lb.	.13½	.14¾
Undecylenic acid, dms., works ... lb.	2.70	–
Urea, 46% N, ind., bulk, Gulf Coast, 50-ton c.l. ... ton	200.00	–
46% N, agricultural, barges, f.o.b. Gulf Coast, granular ... ton	75.00	80.00
46% N, agricultural, f.o.b. Midwest terminals, granular ... ton	100.00	–
Uva-Ursi leaves, bls. ... lb.	.22	–

V

Valerian root, Belgian, bgs. ... lb.	.65	.65
Indian. bgs. ... lb.	.45	–
Vanadium oxytrichloride, 3,000 lb. cyls., works ... lb.	5.40	–
Vanadium pentoxide, tech., gran., per lb. of V_2O_5, 550-lb. dms., works ... lb.	4.10	4.94
fused or flake, per lb. V_2O_5, 550-lb. dms., works ... lb.	3.35	3.65
Vandyke brown, bags., t.l., frt. equald. lb.	.27¼	–
Vanilla beans, Madagascar ... lb.	37.00	–
Java, tins ... lb.	27.00	30.00
Vanillin, USP, dms., f.o.b works ... lb.	6.25	–
Imp., dms ... lb.	4.75	5.00
Versinol Ag ... lb.	.84	–
Vetiveryl acetate, dms. ... kilo	60.50	–
extra ... kilo	63.00	–
Vetiver oil, Bourbon, dms. ... lb.	48.00	–
Chinese ... lb.	18.00	–
Haitian ... lb.	28.50	–
Java ... kilo	32.00	–
Victoria blue toners, molybdated, PMA dms ... lb.	6.20	5.30
tungstated, PTA, dms. ... lb.	10.40	–
Vinyl acetate monomer, tanks, dlvd. lb.	.38	–
Vinyl chloride monomer, polymer grade, tanks, f.o.b. works ... lb.	.28	–
Vinyl ether, USP, anesthesia, 75-cc. bots., hospitals ... bots.	1.56	–
2-Vinylpyridine t.l., dms. works ... kilo.	7.61	–
tanks, works ... kilo.	7.81	–
Vinyltoluene, bulk, f.o.b. ... lb.	.67	.73½
Vitamin A, synthetic, dry, pharm., 500,000 A units per gm., 50-kilo lots ... kilo	33.00	–
Vitamin A, liq. in oil, pharm., 1,000,000 A units per gram, 10 kilo lots ... kilo	41.00	–
Vitamin A, feed grade, 650,000 units per gm. ... kilo.	18.70	23.65
Vitamin B_1 (see Thiamine hydrochloride).		
Vitamin B_2 (see Riboflavin and Yeast).		
Vitamin B_{12}, cryst., non-sterile, USP (cyanocobalamin), vials, 50-gram, lots ... gram	6.00	8.75
Vitamin B_{12}-1% trituration of cryst. B_{12} (cyanocobalamin USP) with dicalcium phosphate, 25-kilo dms. kilo.	10.75	12.75
Vitamin B_{12}, 0.1% trituration of cryst. B_{12} (cyanocobalamin USP) with mannitol, 25-kilo dms. ... kilo.	15.60	–
Vitamin B_{12}, cobalamin concentrate NF with mannitol. 1,000 mcg, per gram, dms. ... per gram activity	16.45	–
Vitamin B_{12}, 1% Vitamin B_{12}, USP, absorbed on resin, 5-kilo dms., 500-gram lots, frt. alld. per gram activity	15.65	–
Vitamin B_{12}, 1% cobalamin concentrate, NF, absorbed on resin, 5-kilo dms., frt. alld. per gram activity	15.40	–
Vitamin B_{12}, 1% cyanocobalamin in gelatin, 2.5-kilo dms., frt. alld. ... per gram activity	15.40	–
Vitamin C (see Ascorbic acid).		
Vitamin D (see Cholecalciferol)		
Vitamin D_2 (see Codliver and Fishliver oils).		
Vitamin E (see a-Tocopherol and Wheat germ oil).		
Vitamin H (see Biotin).		
Violet methyl toner (see Methyl violet toner)		

W

Warfarin 0.5%, dms., ton lots, frt. alld. New York or Chicago ... lb.	.75	–
Wheat germ oil, cold-pressed ... gal.	16.50	17.50
cold-processed ... gal.	14.00	–
Whits precipitate, USP, powd., 100-lb. dms., f.o.b. works ... lb.	7.892	11.24
Whiting (see Calcium carbonate).		
Wintergreen oil, syn. (see Methyl salicylate).		
Witch hazel bark, bls. ... lb.	1.35	–
leaves, bls. ... lb.	1.75	–
400 mesh, bgs., c.l. works ... ton	134.00	–
325 mesh, bgs., c.l. works ... ton	117.00	–
high aspect ratio, bgs., works ton	164.00	–
Wollastonite, t.l., f.o.b., producing plant, general grade ... ton	200.00	–
325 mesh ... ton	140.00	141.00
400 mesh ... ton	160.00	–
1250 mesh ... ton	500.00	–
Wool grease, USP (see Lanolin).		
Wormseed oil (see Chenopodium oil, NF)		
Wormwood oil, cns. ... lb.	31.00	–

X

Xanthan gum, food 300-lb. dms., f.o.b. works ... lb.	5.65	6.20
ind., grade, same basis ... lb.	4.54	–
Xylene, petroleum, ind. or nitration, tanks		
Alliance, La., f.o.b. ... gal.	.76½	–
Atlanta, Ga., dlvd. ... gal.	.76½	–
Bayonne, N.J., dlvd. ... gal.	.76½	–
Bayonne, N.J. f.o.b. ... gal.	.76½	–
Baytown, Tex., f.o.b. ... gal.	.76½	–
Chicago, Ill., dlvd. ... gal.	.76½	–
Clairton, Pa. ... gal.	.76½	–
Ft. Wayne, Ind., dlvd. ... gal.	.76½	–
Gulf Coast, spot, barges ... gal.	.76½	–
Houston, Tex., dlvd. ... gal.	.77	.80
New Jersey Metro, dlvd ... gal.	.76½	–
Xylene, petroleum, ind. or nitration, tanks		
Philadelphia, Pa., dlvd. ... gal.	1.36	–
Providence, R.I., dlvd. ... gal.	1.42	–
South Bend, Ind., dlvd. ... gal.	1.37	–
m-Xylene, high purity, tanks, f.o.b. Texas City, Tex. ... lb.	.36	–
o-Xylene, tanks, works ... lb.	.13¾	–
p-Xylene, tanks, dlvd. ... lb.	.19	–
m-Xylenediamine, dms., t.l., f.o.b. works ... lb.	1.70	–
2,4-Xylidine, tech., liq., c.l., t.l. f.o.b. works ... lb.	1.50	–
Xylidines, mixed, o-m-p., dms., c.l., t.l., f.o.b. works ... lb.	1.00	–

Y

Yara yara, 25-lb. cns. ... lb.	2.61	–
Yeast, pure brewer's debittered, NF, Saccharomyces, t.l., f.o.b works . lb.	1.10	–
Yerba, santa leaves, bls. ... lb.	2.40	–
extra, bots. ... lb.	26.50	31.75
Ylang-ylang oil, extra grade ... lb.	36.50	–
grade 1 ... lb.	25.00	–
grade 2 ... lb.	25.00	–
grade 3 ... lb.	22.00	–

Z

Zein, bgs., 2,000-lb. lots ... lb.	7.50	9.30
Zinc acetate, NF, dms. ... lb.	1.00	1.76
tech., dihydrate, bgs., t.l., works, lb.	1.80	–
Zinc borate, tech., 43% ZnO, 37% B_2O_3, 50-lb. bgs., 20,000-lb. t.l., f.o.b. works ... lb.	.55	–
cryst, 37% ZnO, 49% B_2O_3, 250-lb. dms. 20,000 lbs. t.l. f.o.b. wks. lb.	.89	–
Zinc chloride, USP, gran., dms ... kilo	9.79	–
Zinc chloride, tech., soln. 50%, tanks, f.o.b. Cleveland,		
Ohio ... 100 lbs.	20.20	–
Concord, N.C. ... 100 lbs.	20.20	–
Freeport, Tex. ... 100 lbs.	20.20	–
Old Bridge, N.J. ... 100 lbs.	20.20	–
65 degree, same basis Cleveland, Ohio ... 100 lbs.	27.90	–
Concord, N.C. ... 100 lbs.	27.90	–
Old Bridge, N.J. ... 100 lbs.	27.90	–
70 degree, same basis Cleveland, Ohio ... 100 lbs.	29.70	–
Concord, NC ... 100 lbs.	29.70	–
Old Bridge, NJ ... 100 lbs.	29.70	–
72 degree, same basis Cleveland, Ohio ... 100 lbs.	33.20	–
Concord, NC ... 100 lbs.	33.20	–
Old Bridge, NJ ... 100 lbs.	33.20	–
Zinc chromate, bgs., dlvd. ... lb.	1.12	–
Zinc cyanide, dms., c.l. ... lb.	1.95	2.14
Zinc dust pigment type 1 & 2, dms., c.l., f.o.b. plant ... lb.	.59	.67
Zinc ethylenediamine tetraacetic acid, 8.4% Zn., ammonia salt soln., t.c., t.l., f.o.b. works ... lb.	.56	–
9% Zn., ammonia salt soln., t.c., t.l., f.o.b. works ... lb.	.46	–
Zinc fluoborate, liq. conc., dms., t.l., works, frt. equald. ... lb.	.66	–
Zinc metal, high grade, dlvd. ... lb.	.47	.50
Zinc naphthenate, liq. 6% Zn, dms., dlvd ... lb.	.95	–
Zinc nitrate, tech., flake 300-lb. dms. . lb.	.34	.36
Zinc oxide photo conductive, bgs., c.l., frt. alld. ... lb.	.60	.60
Zinc oxide, USP 50-lb. bxs., c.l., frt. alld. ... lb.	.59	.65
Zinc oxide pigment, American process, lead-free bgs., c.l., frt. alld. ... lb.	.57	.59
Zinc oxide pigment, French process regular, bgs., c.l., frt. alld. ... lb.	.55	.66½
Zinc phenolsulfonate, purif., gran., 250-lb. dms., t.l., frt. alld. ... lb.	1.62	–
Zinc pyridinethione, 48% dispersion, dms., f.o.b. works ... lb.	6.50	8.80
Industrial grade	14.50	–
Zinc resinate precip. 7.2-7.6% Zn, dms., frt. alld. ... lb.	.45	–
Zinc silicofluoride, dms., c.l., t.l., works ... lb.	.17	.2850
Zinc stearate, USP, bulk, t.l. ... lb.	.92	1.06
Zinc sulfate, gran., monohydrate, indust. grade 36% Zn., bgs, c.l., works ... 100 lbs.	30.00	32.00
agricultural grade powd., bulk, same basis ... 100 lbs.	26.50	–
Zinc yellow (see Zinc chromate).		
Zinc-ammonium chloride, bgs., c.l., works ... lb.	.42	–
Zinc undecylenate, dms., works ... lb.	4.67	4.78
Zinc-formaldehyde sulfoxylate, basic 200-lb. dms., frt. alld. ... lb.	1.05	–
Zircon gran. bgs., bulk c.l., works. ton	185.00	177.00
Zircon milled bgs., 200 and 325 mesh, c.l., works ... ton	225.00	–
Zirconium acetate soln., 25% ZrO_2, dms., c.l., 30,000 lbs. min., works ... lb.	.97	–
22% ZrO_2, same basis ... lb.	.78	–
Zirconium hydride, powd., electronic grade, dms., works ... lb.	.31	.75
Zirconium oxide, powd., coml. dms., 2,000 lbs. min. ... lb.	4.25	–
electronic, same basis ... lb.	7.25	–
insulating, stabilized, 325°F same basis ... lb.	3.31	3.62
insulating, unstabilized, 325°F same basis ... lb.	3.56	3.75
dense, stabilized, 30F, same basis . lb.	2.82	–
Zirconium oxychloride, liq., cns. 5-ton lots, works ... lb.	.97	1.04

CHEMICAL IMPORTS

US imports of chemicals and related materials are reported in this section by CPI material. Listings include consignee where possible, container, net weight, name of vessel (in parenthesis), port of origin and date of shipment's arrival in New York or the Port of Newark.

US chemical imports/exports are tabulated monthly in the market reports.

A-B

ABS RESIN Marubeni America 16 plt (38666 lbs) (Ever Golden) Kaohsiung, 11/14.

ACETAMINOPHEN USP CRYSTAL Sterling Organics 242 dms (42414 lbs) (Atlantic Concert) Liverpool, 11/11.

ACETOACT 2 5 DIMETHOXY 4 CLANILI Lonza 60 bgs (2844 lbs) (Koln Express) Bremerhaven, 11/18.

ACETOPHENONE Omnitrene 226 dms (100530 lbs) (Vishva Pallav) Leghorn, 11/24.

ACETYL CHLORIDE Pan American Container 74 pkg (36707 lbs) (Atlantic Concert) Liverpool, 11/11.

ACID ORANGE Goff & Page 40 dms (5071 lbs) (Alva Maersk) Dubai, 11/19.

ACRYLIC E 6 T Sales 21 cs (37652 lbs) (Ming Universe) Keelung, 11/22.

ACRYLIC AND METHACRYLIC ACID Mobil 80 dms (40036 lbs) (Ming Universe) Yokohama, 11/22.

ACRYLIC MONOMERS METHACRYLATES Cheil America 80 dms (35626 lbs) (Ming Universe) Kobe, 11/22.

ACTIVATED CARBON Degussa 800 bgs (26884 lbs) (Koln Express) Bremerhaven, 11/16.

AGAR AGAR Carrageenan Products Intl 323 dms (34504 lbs) (Colombo) Cadiz, 11/24.

ALGINATE PROTANAL Protan Scotia Marine 496 dms (22436 lbs) (Atlantic Service) Bremerhaven, 11/12.

ALLOPURINOL VALPORIC ACID Allirensport 63 pkg (11003 lbs) (Atlantic Service) LeHavre, 11/12.

ALLSPICE A A Sayle 160 bgs (20111 lbs) (San Pedro) Sto Tomas, 11/21

ALUMINA CALCINED GAMMA SO Roder 334 dms (24866 lbs) (Sea Land Adventur) Algeciras, 11/20.

ALUMINUM FLAKE BLUE 25 dms (2762 lbs) (Koln Express) Hamburg, 11/18.

ALUMINUM OXIDE Asahi Chemical Ind America 6 dms (189 lbs) (Zim Tokyo) Yokohama, 11/26.

Les 50 bgs (5209 lbs) (Koln Express) Hamburg, 11/18.

NPS Intl 12 plt (38678 lbs) (Zim Tokyo) Osaka, 11/26.

Degussa 2 bks (66332 lbs) (Alva Maersk) Marseille, 11/16.

ALUMINUM PASTE M O Both Ind 53 dms (0 lbs) (Sea Land Voyager) Bremerhaven, 11/28.

Revell Chemicals 360 dms (43016 lbs) (Alva Maersk) Dubai, 11/18.

ALUMINUM POTASSIUM SULFATE A M Sea & Air Service 720 bgs (40834 lbs) (Ever Going) Folkstowe, 11/23.

AMINOBENZOTRIAZOL Mobay Chemical 4 dms (1071 lbs) (Strathconon) Rotterdam, 11/25.

AMMONIUM BIFLUORIDE Kali Chemie 782 bgs (41128 lbs) (Atlantic Service) Bremerhaven, 11/12.

AMMONIUM DICHROMATE 240 dms (86643 lbs) (Sea Land Developer) Bremerhaven, 11/26.

AMMONIUM PERSULFATE Mitsubishi Intl 1520 bgs (107091 lbs) (Ever Laurel) Tokyo, 11/19.

AMMONIUM THIOCYANATE Akzo Chemie 840 bgs (36665 lbs) (Heide) Hamburg, 11/18.

AMPICILLIN TRIHYDRATE F C Gerlach 109 kgs (6915 lbs) (Atlantic Concert) Liverpool, 11/11.

AMYL BUTYRATE 5 dms (2148 lbs) (Dart Americana) Felixstowe, 11/20.

ANTIMONY TRIOXIDE Minmetals 34 pkg (77955 lbs) (Regina Maersk) Hong Kong, 11/16.

ARABIC GUM Freetrade Container Lines 643 bgs (110649 lbs) (California Star) Antwerp, 11/22.

Kuehne & Nagel 40 bgs (2249 lbs) (Heide) Hamburg, 11/19.

BALSAM TOLU Accelerated Shpg 42 dms (5146 lbs) (Atlantic Concert) Liverpool, 11/11.

BARIUM CARBONATE Meerten Intermodal Expeditor 700 bgs (39198 lbs) (Regina Maersk) Hong Kong, 11/16.

BARIUM CHLORIDE Cometals 4080 bgs (226666 lbs) (Regina Maersk) Kobe, 11/16.

BARIUM HYDROXIDE MONOHYDRATE Ore & Chemical 700 bgs (39700 lbs) (Stefan Starzynski) Rotterdam, 11/26.

BARIUM MONOHYDRATE & EMPTY BAS Ore & Chemical 707 bgs (36700 lbs) (Stefan Starzynski) Rotterdam, 11/26.

BEESWAX Mohawk Customs Service 190 bgs (22462 lbs) (Strathconon) LeHavre, 11/25.

BENZENE SULPHONIC ACID 221 dms (27262 lbs) (Strathconon) Bremerhaven, 11/26.

BENZOYL CHLORIDE Stolt Tank Containers 1 tnk (41491 lbs) (Ever Going) Felixstowe, 11/23.

BENZYL ALCOHOL Monson Chemicals 90 dms (43861 lbs) (Colombo) Barcelona, 11/24.

CDF Chimie 1 bks (41050 lbs) (Stefan Starzynski) LeHavre, 11/26.

BENZYL CYANIDE Inter Maritime Fwdg 1 con (52712 lbs) (Ever Guard) Antwerp, 11/17.

Marlborough Chemicals 2 tnk (64568 lbs) (Atlantic Concert) Liverpool, 11/11.

BENZYL SALICYLATE 17 dms (9145 lbs) (Britta Thien) Rotterdam, 11/26.

BITTER ORANGE OIL Berje Intl 1 tnk (400 lbs) (San Pedro) Haina, 11/21.

BLACK PEPPER 12 dms (0 lbs) (Vishva Pallav) Cochin, 11/24.

BLACK PEPPER OLEORESIN Meer 60 pkg (2426 lbs) (Vishva Pallav) Cochin, 11/24.

BLANC FIXE POWDER Ore & Chemical 21 pkg (41630 lbs) (Atlantic Concert) Antwerp, 11/11.

700 bgs (39700 lbs) (Ever Going) Antwerp, 11/23.

700 bgs (39700 lbs) (Stefan Starzynski) Rotterdam, 11/26.

Ore & Chemical 546 bgs (30646 lbs) (Stefan Starzynski) Rotterdam, 11/26.

BLUE POPPY SEED Gel Spice 880 bgs (440022 lbs) (Oslonia Star) Rotterdam, 11/22.

Transit Trdg 660 bgs (44002 lbs) (Stefan Starzynski) Rotterdam, 11/26.

BORIC ACID Enichem Americas 60 dms (26746 lbs) (Colombo) Leghorn, 11/24.

BRAZILIAN CLOVES Morris J Golomback 200 bgs (22266 lbs) (Santa Catarina) Santos, 11/17.

BRAZILIAN CORNMINT OIL A J Fritz 30 dms (13219 lbs) (Santa Catarina) Itajai, 11/17.

BROMAMINE ACID Silvey Shpg 46 dms (6032 lbs) (Ever Laurel) Hong Kong, 11/18

BROMAMINIC ACID SODIUM SALT MW40 Bemo Shpg 114 dms (17341 lbs) (Ming Universe) Kobe, 11/22.

BUTANEDIOL 1 bks (666864 lbs) (Stolt Avenir) Antwerp, 11/23.

BUTYLENE GLYCOL Brenntag Interchem 1 con (42990 lbs) (California Star, Bremen, 11/22.

C-D

C ACID Alba Fwdg 480 bgs (29535 lbs) (Ming Universe) Yokohama, 11/22.

CADMIUM LITHOPONE PIGMENT Leyden Customs Expediters 40 dms (6554 lbs) (Ming Universe) Yokohama, 11/22.

CALCIUM ICD Group 2397 dms (2082123 lbs) (Novovolynsk) Leningrad, 11/20

CALCIUM CASEINATE De Zaan 600 bgs (44771 lbs) (Ever Guard) Rotterdam, 11/17.

De Zaan 1200 bgs (40596 lbs) (Ever Guard) Rotterdam, 11/17.

600 bgs (20364 lbs) (Ever Going) Rotterdam, 11/23.

CALCIUM FLUORIDE F W Myers 64 dms (18831 lbs) (Regina Maersk) Kobe, 11/18.

CALCIUM HYPOCHLORITE ICD Group 333 dms (36707 lbs) (Zim Tokyo) Yokohama, 11/26.

CALCIUM LACTATE PENTAHYDRATE 430 bgs (21521 lbs) (Ming Universe) Kobe, 11/22.

CAPROIC ACID Ecca Freight Systems 20 dms (6907 lbs) (Dart Atlantica) Antwerp, 11/28.

CAPROLACTAM 1 bks (3319438 lbs) (Stolt Avenir) Antwerp, 11/23.

CARAWAY OIL Caravan Products 10 dms (1224 lbs) (Dart Americana) Antwerp, 11/20.

CARBON GRAPHITE Gunze New York 34 pkg (26763 lbs) (Regina Maersk) Kobe, 11/18.

CARRAGEENAN Maer 60 dms (7011 lbs) (Colombo) Cadiz, 11/24.

CASEIN Adamba Imports Intl 400 bgs (44082 lbs) (Stefan Starzynski) Bremerhaven, 11/26.

CASEINATE Omega Warehousing 720 bgs (37171 lbs) (Sea Land Voyager) Rotterdam, 11/26

CASSIA Oaarnhouwer 299 bgs (33069 lbs) (Saudi Diriyah) Singapore, 11/26.

OMT 215 bgs (33069 lbs) (Saudi Diriyah) Singapore, 11/26.

CASSIA OIL Ven De Vriae Trdg 224 cs (26652 lbs) (Heide) Rotterdam, 11/19.

CASSIA VERA Oaarnhouwer 515 bgs (86136 lbs) (Saudi Diriyah) Singapore, 11/26.

CAUSTIC SODA 1 bks (13550674 lbs) (Stolt Avenir) Antwerp, 11/23.

CELLULOSE POWDER Militzer & Muench 374 bgs (25064 lbs) (Strathconon) Rotterdam, 11/25.

CETYL ALCOHOL FLAKES Glenery Warehouse 962 bgs (43949 lbs) (Strathconon) Rotterdam, 11/25.

CHINA CLAY Hammill & Gillespie 1600 bgs (69890 lbs) (Ever Guard) Felixstowe, 11/17.

CHLORAL HYDRATE Jagro Custom House Brokers 50 brl (3536 lbs) (Koln Express) Hamburg, 11/18.

CHLORHEXIDINE DIGLUCONATE Scanfreight 13 dms (5966 lbs) (Atlantic Concert) Gothenburg, 11/11.

CHLORINE DRY BLEACH ISOCYANURICS Olin 116 dms (34078 lbs) (California Star) Felixstowe, 11/22.

116 kgs (34079 lbs) (California Star) Felixstowe, 11/22.

CHLORTETRACYCLINE Pan American Container 120 dms (614 lbs) (Colombo) Genoa, 11/24.

CHOLESTEROL TECHNICAL Amerchol 20 dms (2466 lbs) (Ever Gather) Osaka, 11/25.

CRUDE BLUE James E Fox 1600 bgs (61664 lbs) (Ming Universe) Yokohama, 11/22.

CUPROUS THIOCYANATE Pluess Stauffer 600 bgs (34946 lbs) (Ever Going) Felixstowe, 11/23.

CYANURIC CHLORIDE Degussa 180 dms (43254 lbs) (Koln Express) Antwerp, 11/18.

180 dms (43254 lbs) (Dart Atlantica) Antwerp, 11/26.

Lonza 320 dms (40071 lbs) (Koln Express) Bremerhaven, 11/18.

320 dms (40071 lbs) (Sea Land Developer) Rotterdam, 11/23.

DEXTROSE Intl Customs Service 420 bgs (42307 lbs) (Sea Land Voyager) Rotterdam, 11/26.

DEXTROSE MONOHYDRATE Ce De Candy 3605 bgs (40159 lbs) (Heide) Rotterdam, 11/19.

DIACETONE ALCOHOL 80 dms (37170 lbs) (Ever Summit) Fos, 11/18.

DIALKYL PENTASULFIDE Mobay Chemical 36 pkg (15432 lbs) (Ever Going) Antwerp, 11/23.

DIAMINO TRIMETHYL BZ SULFONIC AC Bemo Shpg 30 dms (2315 lbs) (Ming Universe) Kobe, 11/22.

DIAMINOANISOLE Mobay Chemical 20 dms (9744 lbs) (Strathconon) Rotterdam, 11/26.

DIANISIDINE HYDROCHLORIDE Nagase America 190 dms (31464 lbs) (Ming Universe) Kobe, 11/22.

DIBROMO PHENYL GLYCIDYL ETHER Nichimen 1 dms (469 lbs) (Regina Maersk) Kobe, 11/16.

DICHLOROANILINE Mobay Chemical 16 dms (6476 lbs) (Strathconon) Rotterdam, 11/26.

DICHLORODIFLUOROMETHANE Kali Chemie 2 tnk (78926 lbs) (Colombo) Barcelona, 11/24.

DICYANDIAMIDE 782 bgs (40124 lbs) (Ever Going) Hamburg, 11/23.

Scan Shpg 420 bgs (43069 lbs) (Stefan Starzynski) Bremerhaven, 11/26.

30 plt (43069 lbs) (Heide) Bremerhaven, 11/18.

DIETHYL PHTHALATE PERMUME Rhone Poulenc 72 dms (40953 lbs) (Strathconon) LeHavre, 11/26.

DIETHYLENETRIAMINE Trelpak 1 con (42549 lbs) (California Star) Rotterdam, 11/22.

1 tnk (42681 lbs) (Britta Thien) Rotterdam, 11/26.

DIMETHYL HYDROZYLATE 1 bks (330635 t lbs) (Stolt Avenir) Rotterdam, 11/23.

DIMETHYL MALONATE Dynamit Nobel 152 brl (73052 lbs) (Stefan Starzynski) Bremerhaven, 11/26.

DIMETHYL SULFOXIDE DMSD 3 con (126069 lbs) (Ever Summit) Fos, 11/16.

DIMETHYLETHYLAMINE 124 dms (42606 lbs) (Ever Summit) Fos, 11/19.

DIPHENYL METHANE DIISOCYANATE Nettles 60 dms (28439 lbs) (California Star) LeHavre, 11/22.

DITHIDBISMORPHOLINE Mobay Chemical 80 plgs (2200 lbs) (Ever Going) Antwerp, 11/23.

DODECYLBENZENE 1 bks (1384178 lbs) (Stolt Avenir) Rotterdam, 11/23.

E-G

EPOXY PHENOLIC NOVOLAC RESIN Ciba Geigy 72 dms (39207 lbs) (Strathconon) Felixstowe, 11/25.

EPOXY RESIN Ciba Geigy 531 ctn (31140 lbs) (Regina Maersk) Kobe, 11/16.

H & C Ind 750 bgs (37649 lbs) (Ever Laurel) Keelung, 11/19.

ETHANOL Whitebread North America 4 tnk (151247 lbs) (Koln Express) Greenock, 11/16.

ETHYL ALCOHOL H & M General Trucking 43 ctn (1803 lbs) (Atlantic Concert) Liverpool, 11/11.

ETHYL CYANOACETATE Bemo Shpg 60 dms (39663 lbs) (Ming Universe) Kobe, 11/22.

ETHYL SODIUM OXALACETATE American Cyanamid 234 dms (54693 lbs) (Ever Guard) LeHavre, 11/17.

ETHYLENE CARBONATE Sanyo 65 dms (36551 lbs) (Ever Golden) Osaka, 11/14.

ETHYLENE GLYCOL MONOBUTYL ETHER R T Vanderbilt 4 mix (562 lbs) (Britta Thien) Rotterdam, 11/26.

FAST SCARLET G BASE Amsax 200 dms (13226 lbs) (Regina Maersk) Kobe, 11/16.

FASTOGEN BLUE KC ETC Alba Fwdg 1620 bgs (66906 lbs) (Zim Tokyo) Yokohama, 11/26.

FERRIC CHLORIDE HEXAHYDRATE Votainer Consolidation Servi 30 dms (6916 lbs) (Koln Express) Rotterdam, 11/16.

FERROUS SULFATE George Uhe 383 bgs (40333 lbs) (Ever Guard) Hamburg, 11/17.

165 mix (45556 lbs) (Ever Guard) Hamburg, 11/17.

FISH OIL Ariste Ind 160 dms (73369 lbs) (Britta Thien) Rotterdam, 11/26.

Pharmacaps 50 dms (22928 lbs) (Atlantic Concert) Gothenburg, 11/11.

Transcontinental Transport S 40 dms (17601 lbs) (Atlantic Concert) Gothenburg, 11/11

FLUOROCARBON F 112 50 dms (36268 lbs) (Ming Universe) Kobe, 11/22.

GELATINE Corbett Intl 44 dms (10221 lbs) (Independence) Marseille, 11/16.

O C Lugo 16 pkg (4769 lbs) (Koln Express) Greenock, 11/16.

CERANIDL 38 dms (15695 lbs) (Britta Thien) Rotterdam, 11/26

GERANYL ACETATE 2 dms (898 lbs) (Britta Thien) Rotterdam, 11/26

GINGER CHUNKS Something Better 20 ctn (0 lbs) (Ever Golden) Singapore, 11/14.

GLYCERIN Life Savers 1 tnk (43343 lbs) (Sea Land Voyager) Rotterdam, 11/26.

Croda Chemical 3 con (131571 lbs) (California Star) Felixstowe, 11/22

Lifo Savers 2 tnk (89022 lbs) (Sea Land Developer) Rotterdam, 11/23

1 bks (656834 lbs) (Stolt Avenir) Rotterdam, 11/23

GRAPHITE Asbury Graphite Mills 900 bgs (122108 lbs) (Vishva Pallav) Colombo, 11/24

Lonza 1440 bgs (82630 lbs) (Sea Land Developer) Rotterdam, 11/23.

GUANIDINE HYDROCHLORIDE 990 bgs (80556 lbs) (Ever Going) Hamburg, 11/23

GUAR GUM Hi Tek Polymers 720 bgs (40000 lbs) (Vishva Pallav) Algeciras, 11/24.

Tic Gums 1600 bgs (81200 lbs) (Vishva Pallav) Algeciras, 11/24.

Hi Tek Polymers 720 bgs (40000 lbs) (Vishva Pallav) Algeciras, 11/24.

GUM COPAL Central Indonesian Trdg 112 bgs (17919 lbs) (Saudi Riyadh) Singapore, 11/25.

GUM DAMAR BATU S Winterbourne 392 bgs (82718 lbs) (Saudi Riyadh) Singapore, 11/25.

GUM ROSIN PDM 440 bgs (49604 lbs) (Koln Express) Rotterdam, 11/16.

Pine Derivatives Marketing 630 bgs (34722 lbs) (Dart Atlantica) Antwerp, 11/26.

H-L

HENNA POWDER Freeport Trade Mart 3 cs (414 lbs) (Sea Land Developer) Rotterdam, 11/23.

HIDE GLUE Goff & Page 400 bgs (40124 lbs) (Santa Catarina) Santos, 11/17.

Taub & Carmel 350 bgs (39642 lbs) (Santa Catarina) Santos, 11/17.

HUNGARIAN PAPRIKA Intl Brokers 312 bgs (34604 lbs) (Stefan Starzynski) Bremerhaven, 11/26.

HYDROFLUORIC ACID Lesohaco 1 tnk (33961 lbs) (Strathconon) Rotterdam, 11/26.

New Wave Transport 72 dms (38810 lbs) (Zim Tokyo) Osaka, 11/26.

HYDROGEN PEROXIDE Degussa 152 dms (79586 lbs) (Koln Express) Antwerp, 11/16.

HYDROQUINONE Rhone Poulenc 200 dms (23651 lbs) (Independence) Marseille, 11/16.

Mitsui 720 bgs (41023 lbs) (Ming Universe) Kobe, 11/22.

Mitsui 176 dms (42970 lbs) (Ming Universe) Kobe, 11/22.

HYDROXYL POLYESTER POLYETHER Mobay Chemical 2 pkg (946 lbs) (Ever Going) Antwerp, 11/23.

HYDROXYL POLYETHER POLYOL BLENO Mobay Chemical 1 pkg (474 lbs) (Ever Going) Antwerp, 11/23.

HYDROXYLAMINE SULFATE Virginia Chemicals 720 bgs (40992 lbs) (California Star) Rotterdam, 11/22

IBUPROFEN USP Mitsubishi Intl 97 dms (11546 lbs) (Regina Maersk) Tokyo, 11/16.

Intermar Steamship 81 dms (6572 lbs) (Strathconon) LeHavre, 11/26.

IMINODIACETIC ACID Maypro Ind 64 dms (12037 lbs) (Ming Universe) Kobe, 11/22

INSULIN E R Squibb & Sons 20 plt (26650 lbs) (Sea Land Voyager) Bremerhaven, 11/26.

IRON BLUE PIGMENT Dainichiseika Color & Chemic 2000 bgs (103581 lbs) (Ming Universe) Yokohama, 11/22.

IRON OXIDE Orgo Thermit 66 dms (77505 lbs) (Ever Guard) Antwerp, 11/17.

84 mix (98707 lbs) (Ever Going) Antwerp, 11/23.

ISOPHORONE 80 dms (37170 lbs) (Independence) Marseille, 11/16.

ISOPHORONE DIAMINE Lesohaco 50 can (3042 lbs) (Strathconon) Bremerhaven, 11/25.

ISOPHORONE DIISOCYANATE Nuodex 400 bgs (16157 lbs) (Strathconon) Rotterdam, 11/25.

J ACID Leyden Customs Expediters 280 ctn (32872 lbs) (Regina Maersk) Hong Kong, 11/16.

KARAYA GUM Meer 180 bgs (19952 lbs) (Sea Land Developer) Rotterdam, 11/23.

L EPHEDRINE HCL Ganes Chemical 200 ctn (12767 lbs) (Regina Maersk) Hong Kong, 11/16.

LACTIC ACID UCB Freight Service 134 dms (0 lbs) (Sea Land Adventur) Algeciras, 11/20.

LACTOSE Bamrak Chemical 288 dms (26603 lbs) (Ever Guard) Rotterdam, 11/17.

LAMPONG BLACK PEPPER Aquatran 200 bgs (27556 lbs) (Saudi Diriyah) Singapore, 11/26.

LAVANDIN OIL 78 dms (36958 lbs) (Independence) Fos, 11/16.

108 pkg (24407 lbs) (Independence) Fos, 11/16.

LEMON OIL Citrus & Allied Essences 26 dms (11120 lbs) (Santa Catarina) Buenos Aires, 11/17.

LINEAR LOW DENSITY POLYETHYLENE Astra Packaging 1 con (24251 lbs) (Saudi Riyadh) Damman, 11/26.

Mobil 42 con (1561601 lbs) (Saudi Diriyah) Damman, 11/26.

Powerflow Products 1 con (55477 lbs) (Saudi Riyadh) Damman, 11/25.

LIONOL BLUE ORGANIC PIGMENT Toyo Ink 400 bgs (21870 lbs) (Ming Universe) Yokohama, 11/22.

LOCUST BEAN GUM Tic Gums 860 bgs (44775 lbs) (Independence) Valencia, 11/16.

M-O

M AMINOBENZOTRIFLUORIDE 47 csk (26184 lbs) (Koln Express) Bremerhaven, 11/16.

MACE OIL 16 dms (6025 lbs) (Ever Golden) Singapore, 11/14.

Ungsrer 16 dms (6653 lbs) (Ever Golden) Singapore, 11/14.

MAGNESIUM CHLORIDE Potash Import & Chemical 420 bgs (42939 lbs) (Atlantic Service) Bremerhaven, 11/12.

MAGNESIUM STEARATES Total Port Clearance 600 bgs (34259 lbs) (California Star) Rotterdam, 11/22.

MAGNESIUM SULFATE J M Rodgers 110 pkg (8083 lbs) (Ming Universe) Yokohama, 11/22.

American Chemical 1360 bgs (75858 lbs) (Regina Maersk) Kobe, 11/16.

MALEIC ACID INTERMEDIATES Lep Transport 100 dms (11905 lbs) (Koln Express) Bremerhaven, 11/16.

MENADIONE SODIUM BISULFITE Omnitrens 200 dms (23810 lbs) (Independence) Valencia, 11/16

MENTHOL Poleromo Mig 60 dms (7130 lbs) (Santa Catarina) Montevideo, 11/17

Bolje 40 dms (2557 lbs) (Koln Express) Hamburg, 11/10.

METHOXYCITRONELLAL S ctn (185 lbs) (Britta Thien) Rotterdam, 11/26.

METHYL CELLULOSE Mitrens 420 dms (51652 lbs) (Ming Universe) Yokohama, 11/22.

METHYL ETHYL KETOXIME Nuodex 76 dms (33342 lbs) (Ever Guard) Rotterdam, 11/17

Troy Chemical 78 dms (35653 lbs) (Britta Thien) Rotterdam, 11/26.

METHYL HEPTENONE 80 dms (33863 lbs) (Ming Universe) Yokohama, 11/22

METHYLIONONE 1 dms (441 lbs) (Britta Thien) Rotterdam, 11/26

MINERAL WAX Strohmeyer & Arpe 882 bgs (89740 lbs) (Ever Guard) Hamburg, 11/17

441 bgs (44870 lbs) (Ever Going) Hamburg, 11/23

MONO TERT BUTYL META CRESOL 1 tnk (41094 lbs) (California Star) Bremen, 11/22.

MONOCHLORACETIC ACID M 1187 Robeco Chemicals 135 dms (42262 lbs) (Ever Going) Rotterdam, 11/23

720 dms (77999 lbs) (Bacol Santos) Santos, 11/17

Hudson Shpg 750 bgs (37668 lbs) (Regina Maersk) Singapore, 11/16

Scanfreight 1570 bgs (76705 lbs) (Ming Universe) Kobe, 11/22

MUNTOK WHITE PEPPER Central Indonesian Trdg 180 bgs (33069 lbs) (Saudi Riyadh) Singapore, 11/25

426 bgs (79048 lbs) (Saudi Diriyah) Singapore, 11/26.

DMT 608 bgs (112911 lbs) (Saudi Diriyah) Singapore, 11/26.

Gel Spice 300 bgs (56436 lbs) (Saudi Diriyah) Singapore, 11/26.

Jentzen & Deeke 180 bgs (33863 lbs) (Saudi Diriyah) Singapore, 11/26.

KHL Flavors 120 bgs (22575 lbs) (Saudi Diriyah) Singapore, 11/26

Ludwig Mueller 360 bgs (67728 lbs) (Saudi Riyadh) Singapore, 11/25.

Ludwig Mueller 486 bgs (90336 lbs) (Saudi Diriyah) Singapore, 11/26.

Morris J Golombeck 180 bgs (33863 lbs) (Saudi Diriyah) Singapore, 11/26

MUSK XYLOL 270 kgs (31369 lbs) (Heide) Rotterdam, 11/18.

NEROL 8 dms (3422 lbs) (Britta Thien) Rotterdam, 11/26.

NERYL ACETATE 6 dms (2696 lbs) (Britta Thien) Rotterdam, 11/26.

NIGROSINE WS POWDER ACID & METAN Penson 65 dms (7344 lbs) (Alva Maersk) Dubai, 11/19.

NYLON RESIN General Traffic Systems 512 bgs (28472 lbs) (Ming Universe) Kobe, 11/22.

ORGANIC PEROXIDE Akzo Burt 22 kgs (1325 lbs) (Dart Americana) Felixstowe, 11/20

ORTHO DIANISIDINE DIHYDROCHLORIDE Bemo Shpg 190 dms (81559 lbs) (Ming Universe) Kobe, 11/22.

P-R

P ACETAMINOBENZENE SULFONYLCHLOR Mitsui 420 dms (50927 lbs) (Zim Tokyo) Osaka, 11/26.

P AMINO ACETANILIDE Silvey Shpg 60 bgs (6680 lbs) (Ever Laurel) Hong Kong, 11/19.

P HYDROXYBENZALDEHYDE Chemical Dynamics 10 dms (1236 lbs) (Ming Universe) Kobe, 11/22.

P HYDROXYBENZOIC ACID Kanematsu Gosho 1600 bgs (80953 lbs) (Ming Universe) Nobe, 11/22.

Mobay Chemical 600 bgs (34304 lbs) (Koln Express) Antwerp, 11/18.

P TERTIARY BUTYL CATECHOL Accelerated Shpg 50 dms (1422 lbs) (Atlantic Concert) Liverpool, 11/11.

P TOLUENE SULFONYL CHLORIDE Bemo Shpg 80 dms (31746 lbs) (Ming Universe) Kobe, 11/22.

PAPRIKA Griffith Laboratories 850 bgs (43287 lbs) (Independence) Valencia, 11/16.

850 bgs (45287 lbs) (Colombo) Valencia, 11/24.

PAPRIKA OLEORESIN Savino Del Bene 10 dms (4872 lbs) (Colombo) Valencia, 11/24.

PARA ACETAMINOBENZENE SULFONYL C Mitsui 420 dms (50926 lbs) (Ming Universe) Kobe, 11/22.

PARA AMINO BENZAMIDE Leyden Customs Expediters 100 dms (12126 lbs) (Ming Universe) Kobe, 11/22.

PARA CRESIDINE FLAKE PMC Specialties 160 dms (47269 lbs) (Ming Universe) Kobe, 11/22.

PARA NITROANILINE Silvey Shpg 278 dms (34834 lbs) (Ever Laurel) Hong Kong, 11/19.

Continued on Page 40

UPE UNIVERSAL PROCESS EQUIPMENT, INC.

OVER 15,000 PIECES OF PROCESS EQUIPMENT IN STOCK...CALL TODAY!

LATEST ADDITIONS

GAL.	PSI	GAL.	PSI
14,000	30	5,800	30
13,000	60	5,600	89
11,000	30	3,400	30
7,000	30	3,200	103
6,400	50	900	352

OTHERS FROM 50 TO 1,000 GAL.

TANKS-316SS
38,000, 18,500, 13,500 (2), 12,000, & 8,600 GAL.
MANY FROM 100 TO 5,000 GAL.

HEAT EXCHANGERS-316SS
19,000, 9,600, 7,200, 3,560, 2,480, 1,035, 853, 705, 617, 814, 471, 350, 182, 125 SQ. FT.
5000 sq. ft. Monsl

HEAT EXCHANGERS-TITANIUM
23,770, 18,000, 18,998, 14,409, 14,252, 8,987, 2,170, 1.470, 1,140, 300, 280, SQ. FT.

REACTORS-316SS
5,100 GAL. 350 PSI AGIT., 3,170 GAL. 359 PSI AGIT. (4)
CENTRIFUGAL PUMPS - 5 TO 100 HP 316SS (40)
HEATER-15MM BTU/HR THERMAL PRODUCTS GAS FIRED SKID MNTD. (2)
COMPRESSORS-1,240 CFM @ 110 PSI 250 HP (2)
220 CFM @ 215 PSI 150 HP (2)
AIR FIN CODLERS TO 80,440 SQ. FT. (6)
ALUMINUM BINS & SILOS TO 3,500 CU.FT.
COLUMNS-316SS-132"X110'X43 TRAY, 90"X35'X10 TRAY16"X33' PACKED 30 PSI (2)

2 VOTATORS model 24-072 Turba-Film Evaporators 35 sq. ft. 316 SS complete system

COMPLETE DRY TONER PLANT/POWDERED COATING PLANT

Complete Lines: Fine Grinding, Drying, Compounding, Packaging, Molding

★ UNUSED 7' Bowen Spray Dryer Complete with all accessories and structural steel
WE WILL SELL COMPLETE LINES.
CALL FOR DETAILS

I/Rand, XLE Air Compressors; 20½ x 12½ x 8½ x 100 PSI 300 HP & 16 x 16 x7, 45 psi 200 HP Ksmp Inert Gas Generator Mdl. DCV 75 L 75000 SCFH

VACUUM DRYERS
325 cu .ft. Abbe, 304 SS dbl. cone
200 cu .ft. 316SS, 6'6"x11'6", rotary
164 cu .ft. Paterson "Consform," 316SS Dbl. cone
150 cu. ft. SS 304 SS Twin Shell
150 cu .ft. SS, & 150 cu.ft. Nickel clad
125 cu .ft. SS & CS, 4'x14', 105/90/150 psi
125 & 83 cu. ft. Buflovak SS Rotary
90, 70, 60, 50, 30, cu. ft. PK SS & G/L dbl cons
70 cu. ft. KS Titanium dbl. cons
40, & 15 cu.ft. Stokes, SS rotary

2 INDUSTRIAL SITES—AVAILABLE IMMEDIATELY

Niagara Falls/New York Area
700,000 Sq. Ft. Buildings...50 acres of land
750,000 Sq. Ft. Buildings...35 acres of land

Plants manufactured Carbon Electrodes

Equipment Highlights:
5 Model 5057 Reymond Hi-Side Roller Mills in operation til Sept. 1986
40 Hi-intensity CS jkt. mixers similar to Littleford's.
Electrical sub stations and switch gear
Dust Collectors and Material Handling Systems
Carbon Extrusion Extruders: 57", 40", 30" & 22"
84" Lathe...New in 1974.
14000 Ton United Hydraulic downstroke forging & forming press
Complete vertical Autoclave System...13' dia. x 28'4", 347 SS, 150 psi & 0.1 MM vac. & @ 700°F
Complete in plant railroad...flat cars/hopper cars/locomotive

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(3) 290 cu. ft. 316 SS rotary vac dryer systems
10'x 14' Elmco rotary vac filter
(2) Niagara 36 H 190 filters SS
NASH H9 vac pump w/fuller V 300 booster
Reactors: (4) 3000 gal. 316 SS 60/30 HP agit w/coils 100 psi
(1) 3000 gal. 316 SS 30 HP, 6TW, 300psi coils
(2) 2000 gal. 316 L SS, 75/200 psi jkt
Tanks: 15000 gal. 316 L SS agit.
5500, gal. (3) 3000, 2200 gal. Monel vertical
4000 gal. G/L Pfaudler Chemetor 30 psi
SS Heat Exchangers from 100 to 500 sq. ft.
plus many misc. items.

GLASS * GLASS * GLASS REACTORS
5,000 GAL. DEDIETRICH 100FV/90 REGLASSED
4,000 GAL. DEDIETRICH 100/90 PSI
3,000 GAL. DEDIETRICH, 100/90, PHILA. DRIVE
3,000 GAL. RA SERIES, 100/90 TW, REGLASSED(2)
2,000 GAL. RA SERIES, 100/90 TW, REGLASSED
1,000 GAL. RA SERIES, 100/90 TW, REGLASSED
1,000 GAL. E SERIES 25/90 (4)
750 GAL. 25/90 TW, (2)
500 GAL. RA SERIES, 100/90, TW
400 GAL. E, SERIES, 25/90, TW
300 GAL. E, SERIES, 25/90, TW
200 GAL. E, SERIES, 25/90 REGLASSED, TW
100 GAL. E, SERIES, 25/90, TW

OVER 100 GLASS LINED REACTORS IN STOCK

GLASS LINED TANKS
FROM 5-22,000 GALLONS
TRAILER LOADS OF GLASS LINED PARTS AVAILABLE
• LOU FALCONE-OUR G/L SPECIALIST WITH 21 YRS. EXPERIENCE IS HERE TO HELP YOU! •

STAINLESS STEEL REACTORS
20,000 GAL. 304SS, 40 & FV
8,000 GAL. 304 SS, 50/5 PSI
8,500 GAL. INCONEL, 40/60 PSI AGIT.
6,000 GAL. 304SS, 100/15 PSI
4,200 GAL. 316 ELC, 60FV/60 PSI
3,000 GAL. 316 ELC, 75 FV/160 PSI
2,800 GAL. 304LSS, 25FV/100 PSI
2,500 GAL. 316 SS 1,000/100PSI (2)
1,300 GAL. 316SS, 150FV/125 PSI
1,000 GAL. 316ELC 100FV/90 PSI
800 GAL. 316SS, 140FV/50 PSI (3)
750 GAL. 316 ELC, 160FV/140 PSI
500 GAL. INCONEL, 50 FV/50 PSI
400 GAL. HAST C., 210 FV/160 PSI

LIQUIDATIONS *
48"X24 TOLHURST SS "BATCHMATIC" CENTRIFUGE (6) COMPLETE
16" DIA. SS, BP TER MEER CENTRIFUGE
60"X40' JEFFREY SS FLUID BED DRYER (2)
60"X20' JEFFREY SS FLUID BED DRYER
8'8X40' FULLER CS ROTARY DRYER, 50 HP
6'6X32' CS ROTARY DRYER
STREGIS 3-STATION BAGGER MDL. 16-VC-3
54" DIA. DUCON 304SS SCRUBBER TYPE L

3-85 CU. FT. DAY SANITARY SS RIBBON BLENDERS, 15 HP
1-43 CU. FT. DAY SANITARY SS RIBBON BLENDER
1-6'X12' SS, K-S PRECOAT ROT VAC FILTER
1-1'X3' K-S PRECOAT ROTARY VACUUM FILTER... WITH ALL ACCESSORIES
1-7' DIA. BOWEN SPRAY DRYER... COMPLETE WITH ALL ACCESSORIES

THIS IS A PARTIAL LISTING
MANY MORE ITEMS AVAILABLE

101500 gal. 4'x16' Horiz. (1)
6000 gal. 10'x10' Vert., 5 HP agit. (1)
12000 gal. 10'x24' Horiz. (1)
12500 gal. 12'x13'6" Vert., 5 HP agit. (2)
13000 gal. 12'x14' Vert. (12)
14000 gal. 12'x27' Vert. (4)

(89) Glass lined & SS Reactor systems complete with condenser, receivers and control panels. from 50 gal. to 4000 gal.
(30) Filter Presses polypro & SS from 18" to 56" plate/ frame & recessed plates.
(25) Vacuum dryer systems complete with condensers, vacuum pumps and receivers.
Double Cone: glass & SS.
Rotary Vacuum Dryers 316 SS
Vacuum Shelf Dryers SS and Heresite lined.
(18) Centrifuges 316 SS automatic basket centrifuges complete with controls and nitrogen purge
Scrubber systems/Vacuum filter systems/Glass lined and SS tank farms.

MUCH MORE!!!
30,000 Gal. 1974 Propane Tank 250 PSI
10,000 Gal. 347 SS Tanks (3)

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GOOD, USED, CHEMICAL, PHARMACEUTICAL & RELATED EQUIPMENT - CENTRIFUGES, DRYERS, FILTERS, REACTORS, TANKS ETC.
WE WILL PURCHASE INDIVIDUAL ITEMS OR COMPLETE PLANTS.
CALL OUR OFFICE TODAY. TOP DOLLARS PAID. NO DEAL TOO BIG OR TOO SMALL.

$AVE $AVE IDM $AVE $AVE

DRYERS

Drum Dryers/Flakers
(1) 24" dia. x 36" Buflovac SS dble. drum dryer
(2) 32" dia.x 106" Blaw Knox CI dble. drum dryer
(1) 32" dia. x 17'8" Sandvik SS belt flaker
(1) 36"dia.x 10' Buflovak CI dble. drum dryer
(3) 42"dia.x120"Blaw Knox CI dble. drum dryer
(1) 48"dia.x 26" drum flaker, chrome plated drum
(1) 48"dia.x 40" CI flaker, mfg. by Buffalo Foundery
(1) 48"dia.x 40 drum flaker, nickel plated drum, mfg. Blaw-Knox

Fluid Bed
(1) 60 Kg. Aeromatic, Batch, 6'x9', 68,000
(1) 100 Kg. Aeromatic Model ST 100, sanitary SS
(1) Fitzpatrick Model FA 250, SS, 20 HP XP

Holoflite
(1) Western Precipitation Model P806SO-A, twin screw, 12" dia. x 20' long, SS constr., jckt. rated 15 psi, complete with 7.5 HP vari-speed drive.
(1) New/Never-Used Joy Processor, CS, single screw, 16"x16' long, rated 110 psi @ 340° F., sprocket & chain drive by 1.5 HP varispeed drive.

Rotary Vacuum
(1) 200 Cu. Ft. Stokes, SS constr., complt.
(2) 165 Cu. Ft. Pfaudler, Double Cone, G/L, 30 #FV/50 psi jktd., 15 HP vari-drive
(1) 150 Cu. Ft. Blaw Knox, Nickel
(2) 132 Cu. Ft. Stokes, Nickel
(1) 72 Cu. Ft. Blaw Knox, SS
(1) 60 Cu. Ft. Titanium Double Cone
(1) 50 Cu. Ft. Gemco, 316SS sanitary, double cone
(1) 37.5 Sq. Ft. Horiz. Thin Film, vac. int. & 150 psig, 304/316SS
(1) 37 Cu. Ft. Gemco, SS
(1) 30 Cu. Ft. P-K Twin Shell, 304SS
(1) 20 Cu. Ft. Abbe Twin Cone, 304SS

Spray
(1) 30"x3' Bowen Laboratory w/3' cone bottom, SS constr., w/centrifugal atomizer, 3 HP blower & motor.(1)
(1) Niro lab size 32"diax2'w/2'cone w/centrif. atomizer SS contacts
(1) 16' dia. Bowen complt. system SS contacts, new 1976

CENTRIFUGES
(1) Delaval 6RPX 309, SS, 20HP
(1) Unused Model B-10 Podbielniak, Alloy 20
(1) Sharples AS-26, SS
(2) Sharples AS-16P, 316SS
(1) Alfa-Laval SS Decanter, Horiz., Mdl. NX314
(2) Dorr Oliver Mdl. CH30 C6U "Merco," 316SS contacts, 150 HP
(1) Baker Perkins S-32 "Pusher Type," SS, 60 HP
(1) Bird 18" x 28", 316 ELC, contour bowl.
(2) Bird 24"x38", 316SS, 40 HP
(3) Sharples P-3000, 316SS, 30 HP
(1) Sharples P-1000, SS 20HP
(1) Unused Bird 36 x96, 317L SS
40" x 20" Tolhurst centrifuge, Kynar lined, perf. basket
(1) Tolhurst 48" x 24" perf. basket, 316SS sanitary, auto. plow & discharge, rated 65 #/cu. ft. @ 900 RPM, 20 HP XP.
(1) Tolhurst 48" x 24" Batchmaster, 316SS, perf. basket, w/hydr. plow & 20 HP hydr. drive
(1) Tolhurst 48"x24" Batchmaster, rubber lined, perf. basket, w/hydr. plow & 20HP hydr. drive
(2) Tolhurst 48" x 24" Batchmaster, Heresite lined, perf. basket, w/hydr. plow & 20 HP hydr. drive
(1) Western states 48"x 24", 316 SS
(1) Fletcher 48"x 28" Suspended type, SS perf. basket, 20/10 HP
(1) Sharples Tornado 48" x 30", 316SS, perf. basket, 40 HP XP
(1) Alfa Laval Model MAPX 210 T24, SS wetted parts
(2) Sharples C-27, 316 SS, wetted parts, 40 HP
(1) Sharples C-20, Super-D-Hydrator, SS, 30 HP
(1) Dorr Oliver Mercone Screener Model C-400 X2, all SS, twin screw disch., 10 HP

PARTIAL LISTING ONLY

COFFEE PLANT LIQUIDATION
(1) Mdl. #DASO-6 Fitzmill w/15 HP motor, on stand.
(1) Mdl. #D-6 Fitzmill w/15 HP main motor & 2 HP on stand.
(1) Mdl. #20H Micro-Pulverizer.
(1) Mdl. #3TH Micro-Pulverizer, SS, w/40 HP main motor & ¾ HP screw motors.
(1) Micro-Pulsair 86 Reverse Jet Dust Collector, Model #84-8-6-20.
(1) 6" x 42" Votator Scrapped Surface Heat Exchanger, w/5 HP motor & jckt.
(1) 48" Sweco Single Deck Screen w/cover, SS constr., 1 HP
(1) 32" w. x 8' lg. Witte Vibrating Conveyor, SS, w'cover, 2-deck.
(1) 2'x6' Witte SS Fluid Bed Dryer w/perf. plate.
(1) 32" W. x 18' Sandvick Belt Flaker, SS, 9' cooling section.
(1) Stokes Freeze Dryer System, complt. w/prebreaker, micro-vac. & York chiller.
(2) Jones Dewatering Presses.
(1) 1500 Gal. SS Jcktd. Mix Tank, 3 HP, dished top, flat bottom.
(2) 2000 Gal. SS Mix Tanks, sanitary fittings.
(2) 1500 Gal. SS Mix Tanks, sanitary fittings, ¾ HP Lightnin.
(1) 2000 Gal. SS Mix Tank, sanitary fittings, 3 HP Lightnin.
(1) 2000 Gal. SS Storage Tank.
(2) 1800 Gal. SS Mix Tanks, sanitary fittings, 3 HP Lightnin.
(1) 1000 Gal. SS Storage Tank, agitator mount, (no agitator)
(1) 1000 Gal. SS Jcktd. Mix Tank, atmos. int., 150 psi jckt.
(3) 1500 Gal. SS Mix Tanks, 3 HP Lightnin.
(2) 22' Dia. Spray Dryers, complete system.

FOR ADDITIONAL INFORMATION-CALL IDM TODAY...

RECENT PURCHASES
(1) Carrier 2'x48' Vibrating fluid dryer, 316SS
(1) Podbielniak mdl. 897DO-2 Cent., 250 PSI
(1) 8,000 gal. CS, Vertical Sphere, Rated 1007 PSIG
(2) 12¾' dia.x307¾' Long Packed Col. 304SS, 275 design press.
(1) 64 sq.ft. U-Tube Heat Exchanger, all 316SS 75/150 psi
(1) 56 sq.ft. Heat Exchanger, all 316SS 75/450 psi
(1) 86 sq.ft. Heat Exchanger, CS/SS 75/450 psi
(1) 90 sq.ft. Heat Exchanger, CS/SS 75/75 psi
(1) 680 sq.ft. Heat Exchanger, CS/SS 75 PSI Shell
(1) 1005 sq.ft. Heat Exchanger, All 316SS 75/150 PSI
(1) 1401 sq.ft. Reboiler CS/SS 75/150 PSI
(8) 850 gal. Levus Lined Plastic Tanks 4'dia.x5½' st.sd.
(2) Fairbanks Morse Gas Compressor 3380. CFM 600 h.p.
(2) I-R Type ESV Compressors 30 HP
(1) DATX Fuller Air Compressor 50 HP
(1) Corken Compressor 7.5 HP

EVAPORATORS
(1) 1 Sq. Ft. Artisan "Kontro" Ajust-O-Film sys., 316SS
(1) 1.4 Sq. Ft. Luwa Wiped Film, 316SS, 1.5 HP
(1) 1.4 sq. Ft. Luwa thin film SS
(1) 2.5 Sq. Ft. Rodney Hunt Turbo Film 347 SS
(1) 5.4 sq. Ft. Luwa filmtruder, 316LSS
(1) 6.54 Sq. Ft. Votator Evaporator System, 316 SS contacts, 15 psi & FV & int., 150 psi jkt.
(1) 8.7 Sq. Ft. Rodney Hunt Turbo-Film, 304 SS contact parts, 15 psi & FV/150 psi jckt.
(1) 10.8 Sq. Ft. Luwa SS Wiped Film Evap. System, 15/550 psi
(1) 18.5 Sq. Ft. Votator Turba-Film, 304 Sanit. SS FV/150 psi 10HP
(1) 20 Sq. Ft. Kontro Horiz. Adjust-O-Film, 316ELC, 50 psig, 15 HP
(1) Approx 31 Sq. ft. Vert., Turbo-Film Processor, 304 SS Contacts
(1) Like New 37.5 Sq. Ft. Luwa Horiz. Thin-Film Dryer, 304/316L SS
(1) 40 Sq. Ft. Kontro Adjust-O-Film, SS constr., 20 HP
(1) 47 Sq. Ft. Artisan rising Film, Hast. "C"
(1) Approx 51 sq. ft. Pfaudler Wiped film, 316 SS, 100/65 & FV
(1) 80 Sq. Ft. Kontro Wiped Film Syst., SS constr., FV/150 psi, 40 HP
(1) UNUSED 88 sq. ft. Luwa thin film dryer horiz. 316 L wetted parts, FV int., 150 psi sat steam jkt.
(1) 141 Sq. Ft. Rodney Hunt Turbo-Film, 316 SS 15 psi int., 35 psi jkt 40 HP XP

BLENDERS
Approx. 460 Cu. Ft. CS, 75HP
UNUSED 460 Cu. Ft. Marion Paddle, CS, 75 HP
400 Cu. Ft. J. H. Day Dbl. Ribbon Carbon Steel Contr. 40 HP (1)
300 Cu. Ft. CS Dbl. Cone 30 HP
200 Cu. Ft. KS 316SS Dbl. Cone
175 Cu. Ft. P-K Twin Shell, 316SS
150 Cu. Ft. J. H. Day Dbl. Ribbon Carbon Steel Contr. 25 HP (2)
69.5 Cu. Ft. CS Dbl. Cone, 7.5 HP
63 Cu. Ft. Marion Paddle, CS
60 Cu. Ft. 304 SS P-K, Twin Shell, w/int. bar
60 Cu. Ft. Gemco Dbl. Cone, 304SS
40 Cu. Ft. Gemco Twin Shell, SS Sant. Finish
30 Cu. Ft. P-K, 304 SS, W/liq. bar.
20 Cu. Ft. P-K, Twin shell, SS
18 Cu. Ft. Robinson Dbl. Rbn. CS
18 Cu. Ft. WC Marion SS
10 Cu. Ft. Gemco dbl. cone, CS, 1½HP
10 Cu. Ft. P-K Genlt Twin Shell 1½HP
10 Cu. Ft. Howes, CS, Dbl. Rbn.
5 Cu. Ft. SS, Dbl. Cone W/liquid-solids bar
10" P-K zig zag
2 Cu. Ft. W.C. Twin Shell, mfg. P-K, SS constr., W/Pin int. bar

FILTERS

Pressure Leaf
1-562 Sq. Ft., 316ELC, Hercules, 26 leaves
1-512 Sq. Ft., 316SS, Niagara, 21 leaves
1-400 Sq. Ft. R/L Sparkler
1-327 Sq. Ft., 304SS, Ind. Filter, 11 leaves
1-320 Sq. Ft. Durco 316 SS, 11 Leaves
1-259 Sq. Ft. Pronto Mdl. #3259, 75 psig
1-200 Sq. Ft., SS, Hercules, Horiz.
1-191 Sq. Ft. Enzinger, SS, Vert., 75 psi
1-182.4 Sq. Ft. Sparkler, 304 SS, Horiz
1 - 157.64 sq. Ft. Sparkler model 55-5-26, 316SS
1-150 Sq. Ft. Horiz., 12 Vert. Leaf 316SS
1-135 Sq. Ft. Ni, Sowser, Vert.
1-35 Sq. Ft. Hercules Model 5, 316 SS, horiz. tank vert leaves 50 psi
1-Sparkler Mdl.#18 D 12, SS const.
1-Sparkler Mdl.#18 D 4, constr.
1-Sparkler Mdl.#33S 28, constr.

Rotary Vacuum
1-56.5 Sq. Ft. KS, Inconel 600
1-58.5 Sq. Ft. K-S, 316SS, flexibelt disch.
1-87.92 Sq. Ft. Feinc, SS wetted parts, spring disch., 58" dia. x 8' lace drum
1-132 Sq. Ft. Dorr Olivnr, 304SS, maxibelt disch.
1-200 Sq. Ft. Elmco, 316SS, 8'x8'
4-250 Sq. Ft. D.O. 316L SS Precoat, 8" x1D', sanit
1-250 Sq. Ft. K-S 316SS, coil disch.
1-300 Sq. Ft. Elmco, 316SS wetted parts, precoat type w/knife disch., 1D" dia. x 1D' drum, complt. w/control panel & aux. equipment
1-314 Sq. Ft. Elmco, precoat disch., 316SS
1-400 Sq. Ft. Elmco, CS, Precoat
1-500 Sq. Ft. Elmco, 316SS, belt disch.
1-3'x1' 316SS, knife disch.
1-3'x1' Dorr Oliver, FRP w/receiver & Nash H4 vac. pump, 1D HP
1-3'x 1' K-S comp. sys., 315 SS Flex-belt disch

LIQUIDATION OF 160MM #/YR. SODIUM TRIPOLYPHOSPHATE PLANT-KEARNY, NEW JERSEY
1-8' dia. x 50' Bartlett Snow Rotary Dryer, SS, 100 HP.
1-8' dia. x 50' Louisville Steamtube Rotary Dryer, SS clad, 40 HP.
1-11'6" x 70' lg. Bartlett Snow Calciner, 316SS, 1100°C., complete.
1-11'6" dia. C.E. Raymond Separator, single whizzer, CS constr.
1-24,000 Gal. Mix Tank, SS constr., 16' dia. x 16', 20 HP.
1-20,000 Gal. Storage Tank, SS constr., 16" dia. x 14'.
2-10,000 Gal. Storage Tank w/-jckt., SS constr., atmos. int., 150 psi jckt.
1-10,000 Gal. Mix Tank, SS constr., 13' dia. x 10', 30HP.
1-10,000 Gal. Mix Tank w/int. coils, 13' dia. x 10', 30 HP.
1-Marley NC Tower, 88"W. x 14'6" L.x 9'H.
1-1130 sq. ft. Micro-Pul Reverse Jet Dust Collector, CS constr.
*Large Quantity Silos. Many Screw Conveyors Available—various sizes, CS & SS construction.

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CALL FOR COMPLETE DETAILS.

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WE ARE GLASS SPECIALISTS WITH A TREMENDOUS INVENTORY FEATURING UNUSED, USED AND REGLASSED ITEMS. OUR SHOP PERSONNEL ARE FULLY TRAINED TO HANDLE GLASS.

REACTORS

Glass Lined
4,000 Gal. Pfaudler, 100/90 psi, TW
4,000 gal Pfaudler, 50/30 psi
3,700 gal Glascote, 50 & FV/90 psi
3,000 gal Glascote, 50 &FV/ 90 psi
3000 gal Pfaudler, 75/90 psi
2,000 gal Pfaudler, 75/90 psi
1,000 Gal. Pfaudler, 100&FV/90 psi, 4RW
1,000 Gal. Pfaudler, RA60 Series, 100& FV/90 psi, 4DW
1,000 Gal. Pfaudler, RA60 Series, 100& FV/90 psi, 4TW
800 Gal. SS clad, 60/60 psi
750 gal. DeDietrick, Phila drive
500 Gal. Pfaudler, 100&FV/85 psi, 6H drive

Stainless Steel
4,000 Gal. 316SS, Atmos./50 psi, withcoils
3,000 Gal. 347SS Blaw Knox, 150/50 psi
2,500 Gal. 316L SS, 75/75 psi, 150 psi int. coils
2000 Gal. Nooter Autoclave, 316L 2000 psi, FV int. coils
2,000 Gal. Dusenberg, 316 SS,15/35 & FV int., 50 psi jkt.
1,750 Gal. 316SS Nolte, 1487/50 psi
1,500 Gal. 304SS, 10 HP Lightnin
1,500 Gal. 304 SS, 100/30 psi
1,000 Gal. 304SS, 250/80 psi
1,000 Gal. 316SS, 50/75 psi jkt
1,000 Gal. 316 SS, 15 & FV/50, 10 HP
1,000 Gal. 316 SS, 100/30 10 HP
750 Gal. 316SS, 75 & FV/50 psi
750 Gal. 304SS, 50/60 psi
600 Gal. 316SS, 3000psi, 10 HP
600 Gal. SS, 50 psi, 1.5 HP XP
500 Gal. 316SS, 55 & FV/55 psi
450 SS, 50/75 psi
100 Gal. 316SS, 15/50 psi
100 Gal. 316ELC SS, 500/90 psi

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4-DRAIS SAND MILLS, TYPE PM-80-STS-DDA. MANUFACTURED 1984-85. PRICED TO SELL • CALL FOR DETAILS

MIXERS
4.5 Gal. Kneader Master Conl., SS w/jkt.
5 Gal. AMK 304SS Jcktd. Kneader Extruder
15 Gal. W.C. Readco Sigma Blade Dbl. arm
25 gal. Readco DSL/Arm Sigma Blade jktd. SS construction 15 H.P.
60 Gal. Hockmeyer Pony, SS contacts, 7.5 HP varispeed
100 Gal., SS, Sigma Blade, Jcktd. 40 HP
200 gal. W-P CS dble arm Sigma blade, 20 HP
500 liter Wafax hi intensity, SS contact parts
500 Gal. S-W Rubber Cement, CS, 2-10 HP motors (2)
Unused 1000 Gal. Sanitary 316SS B-K Dbl. Motion Change Can; 100&FV/165 PSI, 125HP
Littleford Model FKM-600D, SS
Littleford Model FKM-600S, SS
Littleford Model FKM-2000, SS, w/choppers
7 Cu. Ft. 304SS Nauta Model MSX-70
10.6 Cu. Ft. Nauta D-105, CS
Welding Eng. Model 2FV1V2S Twin screw Extruder, SS, Contacts, 150 psi
Koehring mdl. 350, 40 HP
NEW/NEVER USED 75/37.5 HP Hockmeyer Disperser

PLUS LOTS - LOTS MORE

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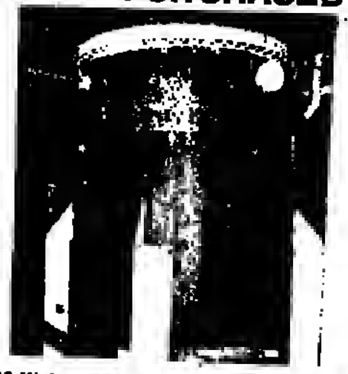

22488-Walter 750 gal. Reactor, 5' dia, dished heads, T 304 SS.
22540-Sandvik 2'x40", belt flaker
22541-Tanks, S/S, 5'x6' (2)
22542-Cowles dispenser, 100 HP.
22544-Mikro 2DH pulverizer
22548-P/S bell dryer, 4'x10'.
22549-Day, 85 cu. ft. ribbon blender, S/S.
22550-Ribbon blender, S/S, 40 cu. ft.
22551-Kettles, 8'x10', S/S dimple jkt. (2)
22553-Quincy Air Compressor
22557-Raymond #50 Imp mill.
22552-Raymond 1A Hammermill.
22545-Caddington bag packers (3)
22447-Dyne Mill mod. KD200, horiz. (2)
22446-Pfaudler 30 gal. G/L reactor (2)
22351-Atlas Copco air compressor, 600 CFM @ 125 psi, 125 HP. (5)
22441-Pappenmeier 600 gal. Liter Mixer/Coller
22480-P.K. twin shell blender, 1 cu. ft. 325 lbs/cu. ft. L/S stainless, w/drives 5 HP bar, ¾ HP main.
22461-P.H. 1 cu. ft., S/S, 275 lb. density, 30 lb. jkt., vac., ¾ HP vari speed main, 2 HP bar.
22344-Christian ribbon mixer, 36 cu. ft. steel jacket, 7.5 HP, unitized.
22342-Sheet extrusion line, Prodex 4.5", 24:1 L/D, 50 HP, sheet die, chill roll stack, Famco shear.
22343-NRM Terret Winder, 48-46 w/2 adjusto speed motors, 1 HP
22449-Gemco 10 cu. ft. S/S, jkt. L/S processor
22498 Acrison mod .203-1052, 1½", 2½", 4" auger w/drives. (3)
22497-Sparkler mod. 18S11, T304 S/S
22489-Walter 750 gal. reactor, FV/100 lb., jkt. 40 lb., 30 HP vari dual motion.
22467-Walter 225 gal. reactor, FV/100 lb., jkt. 40 lb., 10 HP vari dual motion.
22453-Stokes mod. 280 F, 109 ton press.

MIXER – DBL. ARM

22446-B.P. 100 gal. Sigma, S/S, tilt.
22439-B.P. 100 gal. Sigma, S/S
22440-B.P. 200 gal. Sigma, tilt.
22435-Mixer, 250 G. Sigma, S/S, jkt., vac, 100 HP

MIXERS – PLOW

503755-Littleford, FKM 6000, SS jacketed, 25 HP.
20754-Littleford, FKM 3000D 85 CF, S/S, full jacket.
18214-New Plow Mixer, 80 cu. ft. 347SS, jacket, 100HP.
20629-Littleford FKM 42000, S/S, 67 cu. ft. JKT.

MIXER RIBBON

21120-Ribbon Blender, S/S, 10 cu. ft., jkt. SS, 150 psi.
20276-Read ribbon blender, 14.7 cu. ft. 304SS, 3 HP.
20816-Unused Day, 31666, 23 cu. ft., 6HP.
20189-Robinson, 25 cu. ft., S/S, jacket, 10 HP.
22344-Christian Ribbon Blender, 30 cu. ft., C/S dbl spiral Ribbon Inner & Outer
20965-Int'l 34 cu. ft. S/S dbl. ribbon, 5 HP. (4)
20212-Haas ribbon, 36 cu. ft., S/S, 15 HP.
18266-Ribbon Mix 80 cu. ft. T304 SS, 5 HP (4)
19566-Howe, 115 cu. ft., sanitary S/S, double spiral ribbon.
20963-Strong Scott blender, 130 cu. ft., 304SS, 25 XP gear motor.
21124-Ribbon Blender, 304SS jkt., 160 cu. ft., 30 HP.
20614-Unused JH Day ribbon, S/S 270 cu. ft., 25 HP.
21114-JH Day ribbon blender, S/S clad, 75 HP, 460 cu. ft.

MIXER/EXTRUDER

22352-Twin screw extruder (NA Bitruder Co), 65 mm, elect. heated, 20 HP DC, pellett die, vac pump used 100 hours
17654-AMK 25 gal. Mixtruder, Sigma, ST 7.5 HP.
18298-J.H. Day 25 gal. Dispersion, 25 HP vari main, 10 HP vari screw
20996-AMK 30 gal S/S, jkt. Sigma, 7.5 HP Main, 6 HP screw.
21334-Ross 40 gal, S/S hot oil jkt., Sigma 5" disch. screw.
19626-AMK 50 gal. ST, jkt., Sigma.
19421-AMK 75 gal. ST, jkt., Sigma, 10" disch. screw.
17136-AMK 120 gal., ST Sigma, 11.5" screw.
14632-AMH 150 gal., S/S, Sigma 16HP main, 10HP screw
19484-AMK 150 gal., S/S Sigma, 50 HP main, 10HP screw
20116-AMK 150 gal., ST, Sigma, 15 HP/10 HP
503527-New Aaron 300 gal., T304SS, mix extruder, Sigma, jkt., up to 200 HP main, 75 HP hyd. screw.
504528 - Aaron 300 gal. mixer/extruder T304SS, Sigma 150 HP, screw 75 HP hyd. jkt. 200 psi. Vac Cover, Excellent condition. Call Steve (312) 350 - 2200

21350-B.P. 500 gal. Sigma steel, jkt. 125 psi, 150 HP, Hyd. tilt

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NEW SANITARY
USDA APPROVED
RIBBON MIXERS

(Available From Stock)
Quoted as standards, available with ASME code dimpled Jackets
Quick shipment on:
14, 24, 36, 55, 80, 100, and 150 cu. ft. mixers.
Call Steve: (312) 350-2200

UNUSED CENTRIFUGES

21593-Sharples P5400 Sanitary Centrifuges w/200 HP motor, 25 HP backdrive, gearbox, 5" pitch conveyor, CIP, control panel (2) LATE MODEL

CENTRIFUGES

22314-Sharples #16 Super Centrifuge S/S, 3 HP, cooling coils clarifier (22)
20827-Bird, 16"x24" steel, conical bowl.
20828-Bird, 24"x38" steel, con. bowl, gearbox
20819-Bird, 24"x38", S/S, 15 degree, contour bowl.
20884-Bird 24"x60", H series, steel w/motor.
20364-Bird 32"x 50", SS T316 contour, 75HP.
12883-Bird 36"x96" contour, 10 deg., T317 ELC.
20137-Alfa Laval, NX 418-B31-60, 316SS, gearbox.
17308-Dorr Oliver, 3045S, Merco mdl. 16L, 30HP.
13565-Sharples, mdl. P600, gearbox, motor.
19767-Unused Sharples, 3 phase, P3000, S/S, carbide.
20407-Sharples P2000 316SS, 20 HP drive motor.
21359-Sharples P3000 w/gearbox.
20666-Sharples P3000, 52:1 gearbox, S/S casting.
21725-Sharples, P3400, S/S, gearbox & motor.
19249-Sharples, P5400, 316/317SS, 200 HP, gearbox

CENT-BASKET VERT.

21408-Delaval 22"x16" perf. basket hyd. drive.
15816-Delaval Mark III, perf. basket, 40"x24", 616SS, 30 HP, hydr., drive.
18446-Sharples Sludge-Pak, SP-5500, 40"x24" basket centrifuge.

CANADIAN BUYERS
LIQUIDATION–QUEBEC

22373-Reactor, 3500 gal. 8'x9'H, S/S clad, agit, dimple jacket.
22381-Reactor, 5000 gal. 10'x92"H, T316S clad, internal 330 lb., jkt 75 lb., agit 30 HP, vari speed. (2)
22379-Philadelphia, 7V63 agit drives, 10 HP, S/S (4)
22388-Sisbtechnik H-400 centrifuge conturbex horz. screen, S/S, 20 HP.
22365-Climatrol water chiller LFV151172, 40 tons.
22365-Cyclone Seperator, 40" dia. x 2' plus 6" cone, S/S, Joy fan 15 HP.
22375-Sweco 30", 3 deck, S/S, ½ HP (2)
22387-Waukesha mod. 300, Sani pump, 6"x6", 15 HP.

DRYERS

20261-Glatt fluid bed dryer, TFO-60, S/S, 10 HP
20294-Sisterville, 150 cu. ft., T30455, 6' dia. 15 HP
22119-Abbe dbl cone dryer, 20 cu. ft. T304SS, 1 HP.
21397-Olivine shel dryer, 356 sq. ft. #25 C.I. (27)
504474-"Unused" Young vac. dryer, 4' dia.x14', 140 cu. ft., T316LS/S, 25 HP (2)
20327-Ruggles Cole dryer, rotary, 54" dia.x35"L, 15H
20961-Niro spray type F-10 atomizer, 10' dia.x 304SS
21727-Kaiser Pasilliators, 5x20', S/S const. w/drive

TANKS-S/S

22257-UNUSED Tank, 100 gal., T304SS, 30" dia., DH
22253-UNUSED Tank, 550 gal., T304SS, 4' OD, DH
22256-UNUSED Tank, 1200 gal., T304SS, 5' dia.x7'H, DH.
21283-Tank, B/S vert., 1200 gal., 6' dia.x6', flat top & bot.
22255-UNUSED Tank, 1800 gal., T3046S, 6'x6" dia.x7'6"
22254-UNUSED Tank, 3,000 gal., T304SS, vac., 5' dia. x21'H, coil.
20651-Tank, SS, 9000 gal., agit., 12' dia. x 14'6" H.
20655-Tank, SS, 12000 gal., 12' dia. x 14', flat bottom, open top.
17043-Jos Oat horz. tank, 304SS, 15,000 gal., 12'6" dia. x 22'9½" long, 10 PSI.

REACTORS

20252-Unused Reactor, 600 gal., 304SS dimple jktd.
10136-Pfaudler, 800 gal., T-316L SS, 55 PSI int/150 PSI.
20926-Brighton, 4000 gal., 8' dia. x 10', 316ELC S/S
20456-Reactor, 4,000 gal., 316 S/S, 6' dia. x 7'9" st. side.
15475-Brighton, 4000 gal., 316SS, vacuum.
20267-GH Hicks, 4000 gal., 316 SS, pipe coil jkt.
20923-Richmnd Eng. Reactor, 4600 gal., T316 stain/clad.
Pfaudler 10,000 gal. reactors T316L, 100 psi int, 180 psi.
Pfaudler 16,000 gal. reactor T316L, 100 psi int., 200 psi jkt.

PRESSES

UNUSED Manesty Express, 10 ton, 20 stations.
11602-Colton Press mod. 260, 31 die stations, 1800 TAB
21362-FJ Stokes rotary tablet, 15 station, 10 ton
21416-Manesty rotary tablet, 16 station, 10 ton.
14425-Stokes Tab Press mod. #551, 51 station, 4 ton.
21417-FJ Stokes rotary, 27 station, 4 ton, double sided.
503881-Komarek Greaves, mdl. 75MSS briquetting press, 20.5" dia. x 4.5" face.
13392-Fitzpatrick Chilsonator, 50 HP, mdl. HA-50-30-210
18802-Stokes single punch press, 900-530-1 (T4), 12 ton.
17224-Dorst compac., series TPA15, 20 tons.
10690-Stokes, mdl. R-4 press, 20 ton.

22215-Wilmes Sledder Press, S/S, 38" dia. x 9'8" long, horiz, 5 HP, unitized. (2)

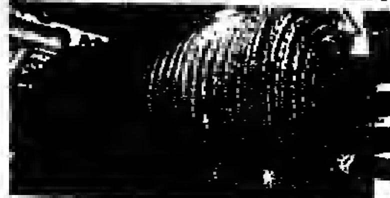
DUST COLLECTORS

21125-Fabri-Jet jdl 5Q9-46 bin vent, 42 sq. ft.
16398-Mikro dust collector, S/S, 63 sq. ft., mdl 9-6-100, pulse jet.
21153-EVD, bin vent, 72 sq. ft., S/S, 5 HP
20253-Unused EVD pulse jet collector, mdl 64BF009C, 90 sq. ft.
21192-JH Day mdl. RJ-18RJ36, 125 sq. ft., CS, 3 HP.
21222-Fabri-Jet, mdl SO16-60, 151 sq. ft.
20396-Pulse jet collector, "FlexKleen," mdl 56CT24 AV II w/175 sq. ft., cloth, C.S
21266-Mikro dust collector, 285 sq. ft., S/S
20256-Unused EVD Corp. pulse jet dust collector, mdl 99BF030C, 350 sq. ft.
20255-Unused EVD Corp. dust collector, shaker type, mdl MS049C10, 575 sq. ft.

SCREENS

21203-Sprout Waldron sifter, 010, 6 decks.
21150-Sprout Waldron, 010, 1 HP, 10 decks, S/S cont
21167-Sprout Waldron, 010, 2HP, 10 decks, S/S cont

ROTARY VAC DRYER



22210–Bertrams, S/S 5' dia. x 12' dished heads, half pipe coil jacket 200 psi, 20/13 HP, unitized.

FILTER PRESSES

19846-Shriver P&F filter press, 12"x12" alum. plates, closed delivery, 23 chambers.
20534-Sperry Filter Press, 30", alumn.
20539-Sperry filter press 30", 35 Aluminum plates, 367 sq.
15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet closing.
15829-Shriver ALP, plate & frame, 16 36" x 36", S/S recessed plates.
20076-Sperry filter press, 36", cast iron plates, closed deliv.
19462-Independant filter press, 42" x 42", polypropylene, 4 eye closed, 34 chambers.
20650-Sperry filter press, 42" Ehcl closer, 41 alum. plates.

FILTER-ROTARY VAC.

15626-FE, Inc. 66" dia.x12", S/S, string disc., 1/2 HP.
17477-FE, Inc., 6' dia x 5', T316SS, belt disc., vac pump.
11177-Dorr Oliver S/S, 5' dia. x 6'L.
11653-Oliver T-316SS, precoat 5'3"x8'.
19431-K.S. flexibelt, 8' dia. x 6' face, 616SS.
18392-Eimco belt filter, 6'x10', steel drum, w/Nash pumps.
15827-Ametek, 6' dia.x14'0" face, maxi-belt, S/S.
17938-Eimco, 316SS, 10' dia. x 14', knife discharge.
17283-Impco belt filter, 12' dia. x 12', 304SS, Nash vacuum.
20261-K.S. T304, vacuum filter, 12' dia x 14', 304SS.
20323-Dorr-Oliver 11'6"x18' face, S/S cont. parts.
11488-Eimco 10'x10' rotary vac. filter.

LIQUIDATION SALE

LARGE POLYSTYRENE PLANT

ILLINOIS LOCATION

21699-Pfaudler Reactor, 1,500 gal., 316L SS dimple jkt.
21696-Pfaudler Reactor, 10,000 gal. 316L SS clad, 60 HP. (4)
21900-Pfaudler Reactor, 15,000 gal. 316L SS dimple jkt. (3)
21697-Metal Arts Corp. vessel, 17,000 gal. vert. 317L SS. (2)
21898-Brighton Corp. Tank, 12,000 gal. vert., solid 316L SS. (2)
21675-Bins, 176 cu. ft., S/S, cone bottom flat top. (4)
21691-Bins, 450 cu. ft., C/S, epoxy lined. (8)
21904-Bins, 450 cu. ft., C/S, epoxy lined. (8)
21905-Bins, 500 cu. ft., C/S, epoxy lined, flat top, conical bottom. (4)
21910-Worthington cent. pump, C/S, 15 HP, 200 GPM at 44 psig (2)
21916-Union Pump-Inline, C/S, mod. 4x6x8.5 VCK, 40 HP. (4)
21906-Edw Renneburg Rot. Dryer, S/S, steam heat, 10 HP. (4)
21681-Heaters, C/S steam, type BNF 2420 (8)
21914-Flotronics bin vent, filters, 122 sq. ft., 12 bags.
21889-Hetron Feeder twinscrew, S/S mod. 5400-150 (4)
21901-Sparkler filter, 352 sq. ft. C/S, mod. VR-32-32.
21802-Screw conveyor, 304SS, 7" dia. x 11L, 1.5 HP.
21688-Strong Scott Rib Blender, 26 cu. ft., 6 HP. (3)
21920-Welex extruder 6", 30:1 L/D, 400 HP.
21670-Welex extruder 6", 30:1 L/D, 600 HP.
21876-Conair pelletizer, S/S, mod. 1024, 40 HP. (2)
21874-Water bath, S/S, portable. (4)
21687-Ross Static Mixer, 304SS, 3"x6 element. (4)
21917-Ingersol Rand pump, In-line pump, C/S, 30 HP.
21915-Goulds, C/S turbine pump, 200 HP. (2)
21913-Worthington cent. pump, S&S, 2 HP. (4)
21912-Union pump-Inline, S/S, 7.5 HP (2)
21910-Tank, 640 gal., flat top & bottom.
21920-Modern Welding Tank, 4800 gal. horiz. rubber lined.
21876-Gorman Rupp pump, centrifugal C/S, mod. 62EZ. (2)
21871-Prodex extruder 8", 30:1 L/D ratio, 800 HP.
21892-Buffalo blower, size 30, C/S, 10 HP (3)
21906-Buffalo exhaust fan, size 38, type B, 15 HP.
21880-Sutor Bill Blower, C/B, 40 HP. (4)
21922-Buffalo blower, type 40-3CB, 40 HP. (4)
21894-Buffalo blower, mod. 45-3CB, 75 HP. (3)
21683-Bird, 32x50 centrifuge, 80:1 gearbox. (2)

21883-Bird Centrifuge, 32x50, 80:1 gearbox.

21893-Environeering scrubber, mod. A33-14000
21895-Tank, 850 gal. vert. coal tar epoxy lined.
21811-Tank, 54000 gal. vert. C/S epoxy coated flat top/bot.
21903-Tank, 60,000 gal. vert. C/S epoxy, flat bot. conical top.
21902-Worthington compressor, mod. 4BB-2, vert. 125 psi. (2)
21879-Sweco sifter 60", mod. LS60S88, 2.5 HP.
21923-Kason sifter 60", mod. K60188, S/S, 1HP.
21884-Flotronics Cyclone mod. FTHEC370-T, 304 S/S 12" dia. dish top. (3)

COMPLETE APPLE JUICE PROCESSING AND BOTTLING PLANT (4800 gal. per hour) MOST ITEMS NEW 1983 & USED LESS THAN 6 MONTHS, COMPLETE PLANT AS ORIGINALLY OPERATED. CALL NOW!

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CENTRIFUGES

DELAVAL MAPX-207 S/S OIL SEPARATOR
SHARPLES AS-16,18V,28 S/S clar./sep. (Rebuilt)
BAKER PERKINS HS-10W S/S "Lab" peeler
BIRD 24x60 ST/CCF design
WESTFALIA SAMR 5036 SS 15 HP
DELAVAL ACVO Disc/Nozzle SS 20 HP
KRAUSE-MAFFEI 18.5" Pusher S/S (Rebuilt)
SHARPLES P-3400, 4000 SS horiz. solid bowl
ALFA-LAVAL NX-214SS DECANTER 20 HP
SHARPLES 46"x30" T-1600 AUTO 316 SS (2)
SHARPLES Mark 3 14" SS perf. auto basket

MIXERS/BLENDERS

P/K 2, 10, 15, 75 cu.ft. SS Twin Shell w/bar
5, 20, 60, 70, 320 cu. ft. S/S dbl. cone w/drive
120, 135, 155, 175, 250, cu.ft. dbl rib S/S
300 gal. J.H. Day Pony Mixer Steel w/can
(2) Vrieco 100 cu.ft. S/S Nauta Mixers

LITTLRFORD 42 cu. ft. S/S jkt. w/choppers
5, 100, 300, 750 S/S dbl. arm w/drive

DRYERS

Patterson 49 cu. ft. rot. vac. cyl. S/S 3'x 7'
P/K 5, 10, 370 cu.ft. SS liq-Sol. Processor
LOUISVILLE 8x45 SS Rot. Hot Air-Steam
BOWEN 4'6" No. 2 TOWER SPRAY DRYER S/S GAS NOZZLE
Spray Dryer, Bowen 30" lab, Niro 48" utility S/S

FILTERS

SPARKLER 352 sq. ft. S/S Mod V-R-32
SPARKLER 18-D-5 S/S Vert. Tank Press Leaf 80#
2.5'x 13' S/S Vacuum Belt Filter
18", 24", 36", 42" P/F Presses C.I. Poly or S/S
SPARKLER HRC 150, 200 S/S Horiz. Press. Leaf
35, 50, 150, 300 sq.ft. Press Leaf S/S

TANKS/REACTORS

28,000 GAL. HORIZ. 316SS Tanks 40# (2)
200 Gal. S/S Reactor 150#/150# W/Agit.
1,200 GAL. T-316 SS REACTOR 30 75/# JKT. w/Agit.
12000 Gal. Horiz SS w/Top Agit, DH. Hds.
18,000 Gal. S/S Reactor 50#/50# 30 HP Agit
30, 50, 150, 200, 1000 Gal. S/S Reactors 100#/75#

MISC. SPECIALS

PFAUDLER 1500 gal. S/S Reactor
MG 1000, 2000, GPH HOMOGENIZER 3000 psi.
85 HP MODULATIC Boiler 250 psf Gas Fired
SIMPSON 1½F, S/S MIX MULLER
8'6"x 78' Autoclave 150# w/track QOD
-FITZ Mills S/S D, D12, FAS012 & Chilsonators
7'x(any length) AUTOCLAVES 100# Code W/Track
-100-10,000 sq.ft. Ht./Exchr's S/B & C/S
150 cu. ft. P/K Twin Shell stl. 10 HP
-100-10,000 gal. G/L Tanks & Reactors
Micro - Pulv. 1SH S/S 5HP W/Screw Feed

SAVE

PLANT SITE SPECIALS

36"x72" Bird horiz. solid bowl cent. stl.
Bienstead 6x50 Rot Hot Air Dryer w/Burner, C/S
60" Sweco S/S 1-deck screen
2000 gal. Pfaudler G/L reactor w/agit.
Bird 40x60 316 S/S Cent. 114:1 100 HP
Feinc. 6'x7' S/S Rot Vac filter
40"x 120" S/S Rotex Vib. Screen 2-deck
12,000 gal Frp Vert. Tanks (2)
1000 gal. Pfaudler G/L reactor 75#/75# w/agit.
Bird 18x28 S/S Contour Bowl Centrifuge
P/S 6'x 46' SS CONVEYOR DRYER
22,500 Gal. Tank/Silo SS Vert 12 ft. x 24 ft.

VIDEX WAREHOUSE SPECIAL
(2) Sharples "Tornadomatic" T-1600H Automatic Basket Centrifuge 48"x 30" Deep, T-316 SS (Rebuilt)

SAVE

JUST PURCHASED

Tanks-20,000 Gal. C/S horiz w/Saddles (4)
Sparkler 18611 S/S press leaf filter jkt.
750 gal. S/S reactor 100# F.V./40# 30 HP agit.
800 Gal. G/L reactor/still
3'x4' Eimco R/L rot. vac. filter
537 sq. ft. Mikro dust collector
Niagara 24 sq. ft. Press. leaf filter S/S
200 gal SS vacuum receiver
M/G Homogenizer 250 M12-8 TBS (8000 PSI)
Patterson, Abba 3,5 cu. ft. S/S dbl. cone vac. dryers
Stokes 73 sq. ft. S/S vac. shelf dryer
B/P 5, 15, 80, 150 GAL. STL. O/ARM MIXER JKT.

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JUST PURCHASED
WESTERN STATES CENTRIFUGE
48" X 30" PERFORATE, S.S. 316
BOTTOM DUMP, HYDRAULIC, 50 HP

BLENDER-330 cu. ft. Areco Steel End
CENTRIFUGE-30"x18" Sharples, Solid, S.S. 316, 25HP
CENTRIFUGE-Podbielniak #5500, PUP, S.S. 316, 2HP Vari XP
COLUMN-36"x20' Pfaudler GlassLined Packed
DRYER-5 cu. ft. P.K. Conical Vacuum Stainless
EVAPORATOR-6.54 sq. ft. Rodney Hunt, S.S. 316, Hot Oil Jkt.
EXCHANGER-388 sq. ft. 304 S.S., 150 PSI UNUSED (4)
EXCHANGER-278 sq. ft. 304 S.S., 175 PSI UNUSED
EXCHANGER-8 sq. ft. All 316 S.S. 150/3000 PSI Code
EXTRUCTOR-Rietz 6", S.S. 304, 5HP Vari XP
FILTERPRESS-24" Columbia S.S. 18 Chmbr, Hydr. (2)
KETTLE-60 gal. Stainless Jacketed
MILL-Fitzpatrick Model D 6 S.S. 5 HP
MIXMULLER-Simpson 2, Style UD, 72" dia., S.S.
MIXMULLER-Simpson 1F, Style UD, 50" dia., S.S.
MIXTRUDER-300 gal. S.S., Jkt., Heavy Duty
PROCESSOR-5 cu. ft. P.K. V-type, S.S. Jkt. Vac. 550#
PROCESSOR-10 cu. ft. P.K. V-type, S.S. Jkt. Vac. 550# (3)
REACTOR-50 gal. Pfaudler GlassLined TW Drive
REACTOR-5 gal. Pfaudler, S.S. 316, 60/90 PSI, TW Drive
TANK-9500 gal. Horizontal, 304 Stainless Saddles
TANK-4200 gal. Vertical, 304 S.S. 25 PSI, UNUSED
TANK-4000 gal. Vertical, 304 S.S. 25 PSI UNUSED (2)
TANK-1000 gal. Pfaudler Glass-Lined Vertical
TANK-30 gal. Pfaudler GlassLined Jacketed
VACUUM PUMP-1550 CFM @ 24" Nash H-10, 125 HP
VACUUM PUMP-Stokes 300CFM 412-H, 10HP (5)
VERSATOR-D-8 Cornell, S.S. 316, 1½ HP Vari XP

H&P EQUIPMENT CO. INC.
P.O. Box 360, Montville, N.J. 07045
(201) 335-9770-1-2-3 ● TELEX 136357

LITTLEFORD FKM 1200, 316 S/S, 26 cu. ft. working, 60 HP VS main drive plus 4-5 HP choppers.
PFAUDLER 8,000 gal. G/L 75/90 PSI, bed glass, TW drive
AMERICAN HEAT 1,335 sq. ft. spiral heat ex. 316 S/S, 75/75
SPERRY 36" plate & frame, iron, 283 sq. ft., 8.33 cu. ft., hyd. closer.
EPWORTH 4'x5' jacketed steel ball mill, 40 HP.
WESTERN STATES 48"x30", perforated, 316S/S, 50HP hyd.
GROEN 80 gal. S/S vac. kettle, jkt., 1 HP scraper.
PATTERSON-KELLEY 1 cu. ft. "V", S/S, 550 lbs.
CHICAGO BOILER 16P sand mill
ABC FORM-A-MATIC case erector, up to 77/min.

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Four (4) Strong Scott 87 cf Sanitary SS Ribbon Blenders
Three (3) Marion 60cf Sanitary SS Blow Blenders
One (1) J.H. Day 54 cf Sanitary SS Jktd. Ribbon Blender
One (1) Strong Scott 45 cf Sanitary SS Ribbon Blender
Four (4) Marion 32 cf Sanitary SS Plow Blenders
Five (5) Fitzmills, Screw Feed Model DAS06 w/10HP
Two (2) Ross 100 gal SS Double Planetary Mixers
Thirty (30) Hoover Tote Bins, Stackable aluminum

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SELECT used machinery

INCONEL/INCOLLOY

STRONG SCOTT SOLIDAIRE DRYERS:

-Mdl SJI-42-22, 42" dia x 22' lg, Incolloy 800 w/carbon steel jacket, 100 HP exp prf mtr. (2)
-Mdl SJI-52-32, 54" dia x 32' lg, Incolloy 800 w/carbon steel jacket, 125 HP exp prf mtr. (2)
-Mdl SJS-24-16, 24" dia x 16' lg, 304 S/ST, dimple jacket, 50 HP vari drv.

BIRD DECANTER CENTRIFUGES:

-36" x 72", Inconel, 10 deg. cylinder, 150 HP mtr, w/wash-out assembly, gauges, valves, circulating oil system, oil pump & filter.

KOMAREK GREAVES BRIQUETTING PRESSES

Mdl 150MS-20.5:9.2, w/rolls measuring 20.5" x 9.2", 65 HP ex 300 speed reducer, 34.2:1 ratio to Linkbelt vari speed drv, incl K/G hydraulic cylinder, mdl H-21-S end feeder.

TWO AVAILABLE

LARGE BIRDS

(12) 40" x 60" Bird decanter, S/ST, 15/3 deg. contour, 5" pitch, single lead conveyors, w/ Stellite hard surfacing, 80:1 gearbox, 100 HP V-belt main mtr drv. New late 80's. Has seen limited use!!!

EIMCOMET ROTARY VACUUM PRECOAT FILTERS

6' dia x 8' wd, S/ST, system incl drives, vacuum pump & receiver.

THREE AVAILABLE

LINK BELT ROTO LOUVRE DRYER

10'3"x36' lh, mdl 1003-36, complete system incl 50 HP drv, firebox w/200,000,000 BTU gas burner, all fans, duct work & controls, multi-cyclone collector, Sly 30,000 CFM baghouse.

Still Installed–Call for FOB pricing.

WESTFALIA CENTRIFUGE

Type SB80-06-177, SST, w/7 HP DRIVE. NEW 1981

POLYPROPYLENE FILTER PRESSES

Shriver 36"x36", closed delivery, 1⅞" thick frames, hydraulic closing system.

4 IN STOCK

RAYMOND ROLLER MILLS

(3) Raymond high side roller mills, mdl 5057, double whizzer separator, fan, feeder, cyclone, duct work & bucket elevator.

STRONG SCOTT ROTARY VACUUM CONTINUATOR DRYER

316 S/ST, mdl CRJ-S64-28, 1100 cu. ft., 150 HP drv, 550 sq. ft. of heat transfer area, 54" dia x 29' lg.

NEW 1966

INDUSTRIAL PRESSURE LEAF FILTERS

(1) 800 sq. ft. & (1) 200 sq. ft. rubber lined tank, quick opening pneumatic door, retractable tank assembly.

SAN FRANCISCO STOCK

WYSSMONT TURBO DRYERS

-Mdl L-12, steam heated, 48" dia S/ST trays & sides, w/heater controls, radiator & feed system.
-Mdl N-22, 8' dia trays 22 high, S/ST, steam heated. May be shipped in one piece.

LARGE REACTOR

[illegible] gallon, 316 S/ST, jacketed, full vacuum, agitated

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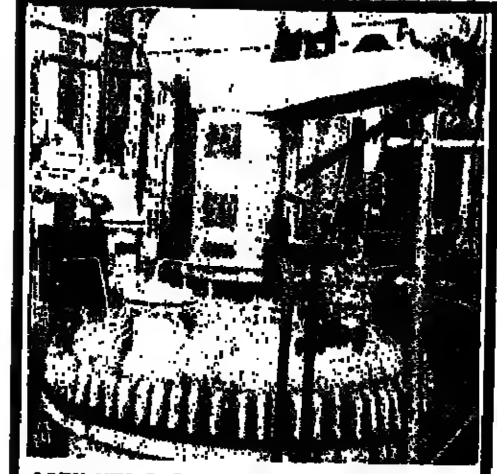

KETTLES-REACTORS, SS

30,000 gal. 304SS fermentors, 14' x 24', 25 psi/vac., coils, 200 HP agit. (4)
5,000 gal. 304SS, dim. int., 75 psi jkt., agit.
4,100 gal. 304SS kettle, 15 psi jkt., 5 HP agit.
3,500 gal. 316SS kettle, 20 psi jkt., 7½ HP agit. (2)
2,500 gal. 304SS reactor, 75 psi/FV int., 150 psi jkt.
1,500 gal. 304SS kettles, jktd., 5 HP agit. (3)
1,500 gal. Pfaudler 316 SS reactor, FV/150 psi, 5 HP Agit. (2)
1,150 gal. 304SS reactor, 15 psi int., 25 psi jkt., 5 HP agit.
900 gal. 304SS reactor, 75 psi/FV int., 150 psi jkt., agit.
600 gal. 304SS reactor, 300 psi int., 75 psi jkt., coils (3)
500 gal. 304SS reactor, 150 psi int., 150 psi jkt., 5 HP agit.
300 gal. 316SS reactor, 75 psi/FV int., 60 psi jkt.
(50)... 316SS and 304SS reactors and kettles from 5 gallon to 400 gallon... call for list.

BIG PFAUDLER 316SS REACTORS

(3) 15,000 gal. Pfaudler, 316SS, 12'0"x 15', 100 psi, 200 psi jkt. Agit.
(1) 10,000 gal. Pfaudler, 316SS, 11'0" x 12'4", 100 psi, 180 psi, jkt. Agit.

REACTORS-GLASS

2 gal. Pfaudler, 750 psi/FV, 700 psi jkt.
20 gal. Pfaudler, 35 psi, 100 psi jkt., agit. (2)
30 gal. Pfaudler, jktd.
50 gal. Pfaudler, 25 psi, 100 psi jkt.
50 gal. Pfaudler, 100 psi/vac., 85 psi jkt., agit., 1975
100 gal. Pfaudler, 25 psi, 90 psi jkt., agit.
150 gal. Pfaudler, 25 psi/vac., 90 psi jkt., agit.
300 gal. Glascote, 25 psi/vac., 90 psi jkt.
500 gal. Pfaudler, 100 psi/vac., 90 psi jkt., vari-drive agit.
500 gal. DeDietrich, 95 psi/vac., 105 psi jkt., 5 HP agit.
750 gal. Pfaudler, 25 psi, 85 psi jkt., 5 TW agit.
1,000 gal. Pfaudler, 100 psi, 90 psi jkt.
1,000 gal. Pfaudler, 75 psi/vac., 90 psi jkt., 10 HP agit.
1,500 gal. DeDietrich, 100 psi/vac., 90 psi jkt., 1981,
1,500 gal. Pfaudler, 100 psi/vac., 90 psi jkt., 25 HP agit.
2,000 gal. Pfaudler, 100 psi/vac., 90 psi jkt., 15 HP agit.
2,500 gal. Pfaudler, 150 psi, 90 psi jkt., #TWS agit.

NEW LIQUIDATION...!!
POLYETHYLENE RECOVERY PLANT – QUEBEC
EQUIPMENT NEW EARLY 1980's!

1-1590#/Day dissolver/extraction system
1-Barr & Murphy 2-stage continuous S/S Fluid Bed Dryer, 3'x15'
1-Dunham - Bush 157 Ton Chiller
5-Nash CL403 Vac. pumps, 40 HP
1-Strong-Scott 200 cu. ft. steel Ribbon Blender, 25 HP
1-Sargent conveyor dryer, S/S, 8'x24', Steam heat

NEW LIQUIDATION...!
CELLOPHANE PLANT...NORTH CAROLINA

1-Impco continuous pressing, conveying, shredding and condensing system
9-Baker-Perkins 135CF Barralite Mixers, Jacketed.
9-Rietz RO118 Disintegrators, 89 HP
5-Sperry 36" x 36" CI Filter Presses
1-Stokes 19"x 2' S/S clad Rot. Vac. Dryer

DRYERS

Nooter 4' x 14' rot. vac., 316SS, 1982, NEW (3)
Blaw Knox 5'4" x 40' SS vac. dryer, 600 cu. ft.
Blaw Knox 36" x 20' vac. dryer 316L SS, 72 cu. ft.
Blaw Knox 66" x 38' vac. dryer, nickel
Mathie 24"x48" flaker, chrome plated
Sandvik 48"x24' SS belt flaker, UNUSED
Bergant 60" x 45' SS conveyor dryer
Blaw Knox 32" x 90" dbl. drum
Aeromatic #ST-5 fluid bed dryer, 5/10 KO
Witte 39" x 10' fluid bed, SS, sanit.-cooler
Bonneberg 39" x 20" rotary dryer, 316 SS
96" x 50' Louisville SS rotary dryer
10' x 100' GATX rot. steam tube dryers, 140 psi (4)
Wyssmont #VTL-24 Turbo-tray dryer, 304SS
P-K 5 cu. ft. vac. dryer, 304SS
P-K 20 cu. ft. vac. dryer, 304L SS (2)
Abbe 30 cu. ft. 304SS vac. dryer
Devine 110 cu. ft. 304 SS vac. dryer
Pfaudler 165 cu. ft. glass-steel vac. dryers (2)
Abbe 325 cu. ft. 316SS vac. dryer
Devine 370 cu. ft. 316SS vac. dryer
Devine 564 sq. ft. vac. shelf dryer
Niro 30" SS spray dryer
Bowen 72" spray dryer, SS
Bowen 96" spray dryer, SS

FILTERS-VACUUM

36" x 1' Dorr-Oliver, fiber glass 8 sq. ft.
36" x 1' Ametek, 316 SS, 9 sq. ft.
40" x 3' Bird-Young, SS, 48 sq. ft.
4' x 16' Elmco, 316SS, 64 sq. ft., horiz.
8' x 3' Ametek, SS, 55 sq. ft.
6' x 4' Elmco, "Elmcomel" polypropylene, UNUSED
8' x 8' Elmco, SS, 200 sq. ft., precoat
8' x 10' Dorr-Oliver, 250 sq. ft., 316SS, precoat
8' x 12' Elmco, 316SS, precoat, 300 sq. ft., (3)
8' x 14' Dorr-Oliver, 316SS, precoat, 350 sq. ft. (2)
10' x 10' Elmco, 316SS, precoat, 314 sq. ft.
11'6" x 18' Elmco, SS contacts
12' x 14' Homline, 304SS, 525 sq. ft., flexibelt disch. (2)

FILTERS-PRESSURE

54 sq. ft. Funda, SS, jktd.
65 sq. ft. Artisan "Dynamic" filter/washer, SS (2)
146 sq. ft. Niagara # 36-140 316 SS (2)
319 sq. ft. Niagara #310-22, 316SS (4)
600 sq. ft. U.S. Autojet, 316SS, sanit.
1000 sq. ft. U.S. Autojet #1000, 304SS
36" Shriver filter press, 546 sq. ft., hydraulic
42" Shriver filter press, 777 sq. ft., hydraulic
48" Shriver ALP recessed filter press, SS, 276 sq. ft.
48" Poly Filter Co. polypropylene filter press, 2094 sq. ft., 87 cu. ft. cake, 1983

PULVERIZERS

Mikro #4TH pulv., 125 HP, UNUSED (15)
Mikro #5MA atomizer, 5 HP
Mikro #6MA atomizer, SS
Pallman #REF8 pulv., 100 HP
Pallman #PP6 pulv., 50/75 HP
Abbe porcelain pebble mills... 36"x42", 36"x48", 42"x60", 48"x60", 60"x48" (7)
Raymond #6058 Hi-side roller mills, dbl. whizzer (2)
Raymond #73612 Hi-side roller mill, dbl. whizzer

NEW LIQUIDATION...
CHEMICAL PLANT...GARFIELD, N.J.

(4) 316SS packed columns; 18" x 18'; 20" x 12'; 36" x 23'; 36" x 40'
(1) 36" x 46' Glitch 316L SS column, 24 trays
(1) 48" dia. x 60' high SS tray column
(1) 60" x 60' Glitch 304L SS column, 60 trays, FV/75 psi
(1) 72" x 39' high SS column, 11 tray
(1) 78" dia. x 43' high Nooter SS column, jacketed, 25 psi/FV 160 psi jkt., 20 trays
(5) Niagara Aero heat exchangers, SS contacts
(21) Shell and tube heat exchangers, 316 SS and 304 SS: 12, 41, 92, 213, 297, 300, 320, 393, 400 (2) 431, 460, 522, 524, 527, (4) 600, 1050, 1300 sq. ft.
(3) Niagara SS leaf filters; 75, 69 sq. ft.
(1) Mikro pulverizer #2TH, SS
(3) Patterson 200 gal. SS Sigma blade mixers, jktd., vac. cover, bottom disch., 20 HP
(1) Porter 62 cu. ft. 304 SS dbl. cone blender
(1) 8000 gal. 316L SS tank, 9' x 18', horiz., coils
(1) 6000 gal. 316L SS vert. tank, 7' x 21', 60 psi WP, coils
(2) 4500 gal. 310 SS tanks, 7'6" x 18', agit.
(1) 1800 gal. 310L SS tank/stills, 8' x 8', w/coils
(1) 1500 gal. 316L SS tank, 5'6" x 6', horiz., w/coils
(8) 318 SS and 304 SS tanks: 1200, 1100, 500 (2), 250, 200, 100 gal.
(6) 3000 gal. vert. steel tanks, 8' x 8'
(1) Industrial filter dual unit deionization system, #3653PGA, Type 266, W/(2) 316L SS columns, 310 SS exchanger and tank, controls, etc... built 1979.
ALSO – SS pumps; (9) rubber-lined tanks on scales to 7500 gal; Rotoclone SS collector; blower; etc.

Over (50) Bird & Sharples decantors

CENTRIFUGES

Sharples P-5400 D-Canter, 316SS, Carbide tiles, late (2)
Sharples P-3400 D-canter, 316SS, tiles (2)
Sharples P-5000 D-canter, 316SS
Sharples P-660 D-canter, 316SS, back drive
Bird 12" x 30", 316SS, Decanter, 20 HP
Bird 18" x 28", 316SS, Decanter (3)
Bird 24" x 38" Decanter, 304SS, contour-10
Bird 24" x 38" Decanter, 316SS, contour (3)
Bird 24" x 60" Decanter, steel
Bird 24" x 86" Decanter, SS, 125 HP
Bird 24"x 86" decanter, 304SS, carbide tiles, 1981, UNUSED (3)
Bird 32" x 50" Decanter, Monel, contour (2)
Bird 32" x 50" Decanter, 304SS, contour
DeLaval NX214-31B Decanter, 304SS, 20 HP (2)
Sharples AS16V "Super," SS (5)
Sharples AS26V "Super," SS
DeLaval BRPX-213-30, 316SS separator/desludgers (3)
Westfalia SAMH15037, Desludger/Separator, 316SS
Westfalia SA14-35-076 3-way separator, 316SS
Krupp 19" pusher, 316SS, 16 HP
Baker-Perkins 19" pusher, 304SS, 40 HP
Sharples 27" D-Hydrator, 316SS...spares (3)
Sharples 48" T-1600 auto-basket, 100 HP
Tolhurst 48" Batchmaster, rubber lined, 30 HP
Sharples 48" Tornado-Matic, SS, 25 HP
DeLaval 48" Mark 111, 316SS hyd.
CENTRIFUGE PARTS... Sharples, Bird, DeLaval, etc.

EVAPORATORS

2.4 sq. ft. Rodney-Hunt SS, 3 HP
21 sq. ft. Rodney-Hunt Turbafilm #4, SS
97 sq. ft. Rodney-Hunt, 304 SS, Turbafilm
100 sq. ft. Pfaudler, 316L SS, wiped film
600 sq. ft. Goslin-Birmingham dbl. effect, SS
854 sq. ft. Buflovak dbl. effect, SS
1888 sq. ft. Roger dbl. effect, SS
Swenson 316SS continuous crystallizer, 9" x 14'

TANKS & VESSELS

30,000 gal., 304SS, 14' x 24', coils, 200HP agit. (4)
20,000 gal., 304SS, 12' x 24' (2)
17,000 gal., 304SS, 11' x 24' (3
17,000 gal., 316LSS, 14' x 18', Agit. (2)
12,000 gal., 316LSS, 12' x 14', Agit. (5)
10,500 gal., 316L SS, 8' x 25'
10,400 gal., 304SS, 19'8" x 16', agit.
9,000 gal., 304SS, 19'6" x 12'
5,000 gal., 304SS, 9'x8', 25 HP agit.
3,500 gal., 304SS, 8'x9'
3,000 gal., 304SS, 7'x 10', agit.

MIXERS, BLENDERS

3.5 cu. ft. Henschel #FM100, 17/20 KW
11.5 cu. ft. Henschel #115JSS, 92/46 HP
13.7 cu. ft. Lodige #W600/K1200, mix/cool comb.
20 cu. ft. P-K twin shell SS
33 cu. ft. Abbe high intensity, SS, 40/20 HP
35 cu. ft. Day Nauta, #HBX350, SS
43 cu. ft. Littleford #FKM2000E, SS, Choppers
52 cu. ft. Nauta 304SS mixer (2)
60 cu. ft. Gemco, TW SH, Sanit, SS
99 cu. ft. Patterson dbl. cone, SS
70 cu. ft. Day Nauta, #H9700, 10 HP
75 cu. ft. Day Nauta, SS, jktd.
75 cu. ft. Robinson SS ribbon blender, jktd.
98 cu. ft. Day Nauta, SS, 1981
119 cu. ft. J.H. Day, dbl. ribbon, 316SS
120 cu. ft. Cleveland ribbon blenders (5)
144 cu. ft. 304SS dbl. ribbon blender, 30 HP
169 cu. ft. Pfaudler; dbl. cone, glass steel jktd., vacuum
200 cu. ft. Young, ribbon, SS

NEW LIQUIDATION
ULTRA-MODERN 5000 TONS/DAY BEET SUGAR PROCESSING PLANT & REFINERY... BUILT 1970, UPDATED 1983...LOCATED EASTERN CANADA, NEAR WATER... VERY BIG SAVINGS IN TIME & MONEY...CALL FOR DETAILS!

NEW & UNUSED PROCESS EQUIP., 1982, IN ORIGINAL PACKING ... SOUTH CAROLINA, CALL! Phone (609) 267-1600

BALERS, Dispozapak #D600 balers, (2)
BAG PACKER, Howe-Richardson #G-S-17 semi-automatic bagging system SS contacts
BINS, 304L SS contacts, 1300 cu.ft./9720 gal.
CENTRIFUGE, Bird 24"x96", 304SS, Model 15 solid bowl continuous, 10 deg. contour bowl, Tungsten carbide tiles on conveyor, 150 HP
CHLORINATION SYSTEM, Wallace & Tiernan
COLUMN, 48" dia. x 15'9", 304SS
CYCLONE, DuCon Model 700/175 304SS high efficiency cyclones, size 210, Type VM (8)
DRYERS, Nooter 4' x 14' rotary vac. dryer, 316L SS shell and jacket, Incoloy ribbon agit. ASME 100 psi/FV int. & jacket. 100 HP
DUST COLLECTORS, EVO reverse pulse, 100 320, 640 sq. ft. (4)
FURNACE, C-E Air Co. "Cor-Pak" thermo oxydizers, direct gas fired
MIXER, Air mix blender system, Koppers-Sprout Waldron #36-50, 500 cu.ft., 304SS
MIXERS, Webb, 59" W x 15'L twin shaft paddle mixers or pug mills, 304SS contacts, (2)
PULVERIZERS, Mikro #4TH pulverizers, 125 HP drive, (15)

"AUCTION SALE"... POLYVINYL COMPOUNDING PLANT...CARTERET, N.J. CALL GEORGE CRONIN @ (609) 267-1600

(2) Munson 300 cu.ft. blenders, 104" dia., #TS-300GB, pkgd.
(1) Munson 110 cu.ft. blender, 90" dia., #700/11D, pkgd.
(2) Munson 90 cu.ft. blenders, 80" dia., #7TS9D, pkgd.
(2) 400 cu.ft. Gruendler ribbon blenders
(2) 215 cu.ft. Cleveland ribbon blenders
(2) Eirich 10' dia. intensive mix mullers, motorized pan and mullers
(2) Komline dbl. cone blenders; 320 cu.ft. (10' dia.), 69 cu.ft. (8' dia.)
(3) Gruendler hammermills, 150 HP, 1980
(2) Gruendler hammermills, 100 HP, 60 HP
(1) Mikro #8D atomizer pulverizer, 30 HP
(1) Mikro #4TH pulverizer, 50 HP
(2) Saw tooth breakers/crushers
(2) St. Regis baggers
(1) "Push-Pull" railcar unloading system
(25) Flexkleen, Dustex, etc., bag type dust collectors
(2) Box sifters
(1) Handling system w/(2) 2000 lbs. elevators, 80' powered roller conveyor, etc.
ALSO...laboratory with lab apparatus, tables, equipment, etc.; motor control center units; Gardner-Denver air compressor; etc., etc.

Poly Filter co. 48" polypropylene filter press, (100) chambers, 2094 sq. ft., 87 cu. ft. cake, hydraulic...1983, CALL!

JUST PURCHASED!...(9) Patterson & Abbe batch ball mills & pebble mill, various sizes... CALL!

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MEMBER

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BAUXITE PLANT ... ARKANSAS LOCATION

NEW EQUIPMENT

4' x 40' Bartlett-Snow Rotary Kiln
3' x 20' Bartlett-Snow Rotary Kiln
3' x 20' Bartlett-Snow Rotary Dryer
M-400 (16") Bird Pusher Centrifuge, 316 S/S (2)
18' Bird Horizontal Screen Bowl Centrifuge, 316 S/S
12' x 15' Jeffrey Fluid Bed Dryer, S/S
60" Wide Proctor & Schwartz Belt Dryer
Marley Cooling Tower
Multi-Stage Evaporator System

USED EQUIPMENT

9'6" x 250' Traylor Rotary Kilns (8)
8'3" x 43' Traylor Rotary Coolers (8)
6' x 40' Allis-Chalmers Rotary Coolers (6)
9' x 19' Traylor Ball Mills, 450 H.P. (4)
Belt Conveyor-up to 54" wide, up to 500' long
10" x 24" Allis-Chalmers Jaw Crusher
Size 322 Allis-Chalmers Hydro-Cone Crusher
250 TPH Pennsylvania Hammermills (4)
8' x 30' Chatanooga Paddle Mixer (2)
8' x 12' Chatanooga Paddle Mixer (2)
Misc. Pumps, Compressors, Screens, Tanks, Dust Collectors, Feeders and Conveyors.

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Federal Equipment Company
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Cleveland, Ohio 44127 • 216-271-3500

Tanks: 250-1400 Gal. storage & mixing, S/S & fiberglass
5000 Gal. 304 S/S storage tank, vertical, closed, dished hds.
(2) Richmond 3000 Gal. S/S Reactors, 90/40 PSI, 50 HP 2-Spd.
Richmond 3000 Gal. S/S Reactor, 60/40 PSI, 20 HP.
(3) Pfaudler 30 Gal. S/S Reactors, 60/90 PSI, 1½ HP XP V/S.
Hercules 500 Sq. Ft. "Roto-Jet" Filter, 310 S/S, 60 PSI.
Jacobson SDSF-11 "Universal" Hammer Mill, 100 HP.
(2) Entoleter Type EIM "Centrimil", 48" dia., 316 S/S, 150 HP.
Simpson "Rotex" model 661 Sifter, 316 S/S, single deck.
Fitzmill, 310 S/S, No. DKAS012, 20 HP.
Holo-Flite Screw Dryer, 18" dia. x 20' L., C/S, Jkt. trough.
Chromalox 200 KW Hot Oil Unit.
Chromalox 20 KW Hot Oil Unit (ALL XP)
Sterling 12 KW Hot Oil Unit.
Hockmeyer 50/25 HP High Speed Disperser S/S, XP #2 Spd.
(3) Guesmeyer model OR8 Sand Mills, 30 HP XP.
Morehouse-Cowles 12-30 S 16-25 Sand Mills, 40 & 20 HP XP.
Patterson Steel Ball Mills, 0'x8' & 0'x5' and other sizes.
Abbe 4½x13' Continuous Steel Ball Mill, 60 HP.
Patterson & Abbe Ceramic-Lined Pebble Mills from 15"x21"+up.
Reliable 6"x12" Two Roll Mill, 0 HP.
110 Cu. Ft. C/S heavy-duty ribbon blender, jkt. 20 HP.
(2) Lelech S/S sanitary ribbon blenders, 12.25 Cu. Ft., 2 HP.
J.H. Day "Nauta" Blender, 21, Cu. Ft. 310 S/S, MBX
Votator: (2) 4"x48" L. Tubes, 316 S/S, 15 HP.
Dorr-Oliver "Web-Trol" 0'x0' Rot. Vac. Filter, 310 S/S.
Crandall 0-Gal. subsurface weigh-type filler, S/S, model F-2.
Turba-Film 1.13 Sq. Ft. Lab evaporator, 316 S/S, 1 HP complete.
Nichols/Niro 10 ft. Dia. Spray Dryer, 126 #/Hr., all S/S.
Baker-Perkins & Readco dbl. arm mixers: 2½ to 350 gal., C/S, S/S
Heat Exchanger 463 sq. ft., 304 S/S, 75/10 psi.
(2) Rietz prebreaker, UNUSED Model PB-10, C/S, 20 HP
(4) Rietz extructor, UNUSED Model RE-12, C/S, 10 HP

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(312) 842-2200

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JLM

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-Devine 100 cu. ft. Dbl. Cone Blender, C/S
-J.H. Day 40 cu. ft. CO Ribbon Blender (3)
-Nauta Mixer 70 cu. ft SO 10HP (2)
-Patterson Kelley 1 cu. ft. Twin Shell SS 500 lb. Dens.
-Patterson Kelley 30 cu. ft. Twin Shell Blender
-Patterson Kelley 40 cu. ft. Twin Shell Blender
-Patterson Kelley 1000 cu. ft. C/S Blender 70HP
-Patterson Kelley 4 qt. SS Twin Shell/liq. solids
-Paul O. Abbe 90 cu. ft. SS/sanit. jktd. vac. Blender 00HP
-Readco Sigma Blade Mixer 10 gal. SS Oval Level (Like New)
-Ross 10 gal. Planetary Mixer SO
-Ross 10 gal. SS jktd mixtruder 7½ HP mdl. AMK 15
-Strong-Scott 200 cu. ft. C/B Ribbon Blender

FILTERS

-Bird (Pannevis) Filter 8S, 12"W x 17'L
-Elmco 4'x12' Vac. Belt Filter 310 SS
-Enzinger Leaf Filter SS 360 sq. ft.
-Eviraz SS Rotary Filters 8 x 0
-Funda Filter 4' dia., 95, jktd. w/20HP Drive
-Hercules Filter 500 sq. ft. 316 SS
-Industrial Filter 100 sq. ft. Type 122 ID 21 MDL OMD
-Shriver 36" ALP 310 SS, 41, 40 Chem (2)
-Sparkler Filter MDL # 18 D-4 SS jkt/OS 8-6
-Sperry 42" Plypro Filter Press 48 Chambers
-Star SS Filter Presses 18" (5)
-US Autojet Filter SO 00 & 750 sq. ft.

DRYERS

-Abbe 20 cu. ft. SS Conical Vac. Dryer
-Aeromatic Fluid Bed Dryer Lab. MDL-15/100 ST
-Bowen Spray Dryers 7½' & 5' SS
-Fitzpatrick Fluid Bed Dryer SS Lab MDL #75
-Demco Dbl. Cone vac Dryer 10 cu. ft. SS
-Jeffery Fluid Bed Dryers 2'x20' SS (2)
-Patterson Kelley Twin Shell 103 cu. ft. vac. processor 90
-Patterson Kelley Twin Shell vac. Dryer 75 cu. ft.
-Patterson Kelley 5 cu. ft. OS Conical Vac Dryer.
-Pfaudler Conical vac. Dryer G/L 72 cu. ft. compl. sys.
-Standard Hersey 4'x30' Rotary Dryer SS
-Stokes 5'x30' Rotary Vac. Dryer, jktd., SS
-Stokes Vac. Shelf Dryers 40.9 sq. ft. (7)
-Strong Scott Rotary Vac. Dryer SO 3'x12' Solidaire

THIS IS ONLY A PARTIAL LISTING

NEW ARRIVALS

-Sweco Separator 30" CS single deck (5)
-Kady Dissolver 20 HP vari speed
-Abbe Eng. Lab Disperser 10 gal. SS jktd
-Votator SS lab
-Chemetron Heat Exchanger Scrape Wall 9 sq. ft.

-Chromalox Hot Oil Heaters 20 S 40 KW S 80 H.W. complete system UNUSED

-Meteer Filler Model No. S3A Auger Type, SS/sanit

-Autoclave 200 gal. SS 115/350
-Artisan 1 sq. ft. wiped film evaporator SS complete system
-Micro Atomizer SS 5HP XP Mdl. #5MA
-Ross 2 gal Planetary Mixer Model # 130 BLS/S jkt bowl

PAINT PLANT LIQUIDATIONS

-Abbe 12"x10" steel, jktd., lab ball mill
-Cowles Dissolver, 50/40/30/1½/1 HP
-10HP, Dissolver, vari speed
-0HP, Dissolver, straight speed
-30HP, Hill Homo Mixer
-Kady Mill, 100 gal, ss, jktd., 30HP
-Ross 3 Roll Mill, lab, 4½" x 10", 4"x9"
-Reitz disintegrator SS 5HP
-Schold Shot Mill 304 SS jktd. 100HP (2)

CENTRIFUGES

-Bird Centrifuge C/S 40"x00" Solid Bowl
-Bird Centrifuge C/S 10"x29" Contour Bowl
-Bird 36"x50" 347SS Contour Bowl
-Sharples 12" SS Lab Model/Brighton Lab
-Sharples P-60D/3000/5000 Decanter SS
-Sharples Centrifuge 12" SS solid bowl w/skimmer (2)
-Tolhurst Centrifuge 26" SS perf. basket

GRINDERS & MILLS

-Alpine Sieve Model # A-32-109 LS
-Cumberland Grinder Size 14
-Entoleter Compact Mill, Type EIM, SS, 30HP
-Fitzmill Model # D-6/DOAO/12, 3DHP SS
-Dreerca Colloid Mill, 3HP O 5HP
-Micro Pulverizer 4 TH (3)
-Patterson Ball Mill 3'x4' jkt.
-Rotex Screener 2'x4'/1'x3'
-Simpson Mueller 6"x5" size 2 VD mixer 20HP
-Sweco Separator 40"/30"/24"/10" SS

REACTORS

-4000 gal. 310 SS reactor 00/500 psi half pipe jacket (4)
-Harwalk 3000 & 750 gal. SS reactor dimple jktd FV/50
-Pfaudler 9200 gal G/L Reactor 90/90 psi Unused
-Downington 1500 gal. Monel Clad reactor 55/70 psi
-13,500 gal. 304 Elc Dim., Jktd, Reactor, 30/100 psi
-Pfaudler 500 gal. G/L jktd. vac. reactor

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RIETZ RP12 Disintegrator
STRONG SCOTT SS Turbulizer
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DAY & LEHMANN 2 & 3 Roll Mills
PREMIER 5 HP Variable Speed Dispersator

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STOKES & EKERMAN 30", 38", 42" & 60" SS Coating Pans
PELLIGRINI T600 SS Coating Pan
MERILL 86-14 Tablet Counter

FILLERS

MATEER 348 HiSpeed Auger
COZZOLI LFS 40 & Piston Automatic SS
PNEUMATIC 30, 24, 18 & 8 Head Rotary SS
MRM, HORIX & KIEFER 30, 24, 18, 12 & 8 Head Rotary
ELGIN & HOPE 2, 4 & 8 Piston
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FILAMATIC DAS. AB4
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PERRY Accofil
BURSA F3 & BOCK Fillers
NALBACH High Speed Power Filling Line

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WORLD Super CM Compack 7 & 14
DENNISON, LABELAIRE, FASSON, NEW JERSEY, STANDARD KNAPP RURT & MRM

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CAPEM D8F, D6F, C4F, C2F & BIF,
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CANCO, CONTINENTAL & ANGELUS Can Seamers
RESINA FW Rectangular Spice Filament Applicator

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Chem/Mart Corp. will buy all of your surplus or off spec. chemicals, plastics, pharmaceuticals and resins. Current bargain offerings: Der 687 Resin; 19M lbs Kraton D4141; Calcium Acetate, U.S.P. and Gallic Acid, 18 dr. 3,4 Dimethylaniline and 10M lb Cadmium Bromide, 99 percent Prompt efficient Nationwide service. Chem/Mart Corporation, 840 N. LaSalle St. Chicago, IL 60610. (312) 787-8800.

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CHEMICAL IMPORTS

Continued from Page 33

PARAFFIN WAX Diana 144 bxs (5397 lbs) (Koln Express) Hamburg, 11/18.
PARAFORMALDEHYDE T R America Chemicals 22 bkt (45640 lbs) (Sea Land Adventur) Algeciras, 11/20.
Troy Chemical 842 bgs (43899 lbs) (Ever Gather) Keelung, 11/25
PATCHOULI OIL 258 dms (12163 lbs) (Ever Golden) Singapore, 11/14
PATCHOULI OIL CRUDE 150 dms (73010 lbs) (Ever Golden) Singapore, 11/14.
PETTITGRAIN TAILS J Manheimer 14 dms (5628 lbs) (Ove Skou) Rio D Janeiro, 11/24.
PETROLEUM RESIN ARKON & SUPER ES Mitrans 619 mix (36680 lbs) (Ming Universe) Kobe, 11/22.
PETROLEUM RESIN ARKON P 125 Mitrans 840 bgs (37037 lbs) (Ming Universe) Kobe, 11/22.
Mitrans 1280 bgs (74074 lbs) (Ming Universe) Kobe, 11/22.
Mitrans 840 bgs (37037 lbs) (Ming Universe) Kobe, 11/22.
Mitrans 640 bgs (37037 lbs) (Ming Universe) Kobe, 11/22.
Mitrans 640 bgs (37037 lbs) (Ming Universe) Kobe, 11/22.
Mitsui 8611 bgs (338082 lbs) (Ming Universe) Kobe, 11/22.
PHENYLACETIC ACID Inter Maritime Fwdg 190 dms (22703 lbs) (Stefan Starzynski) LeHavre, 11/28.
PHOSPHORIC ACID 1 bks (2265896 lbs) (Stolt Avenir) Rotterdam, 11/23
PHOSPHORUS PENTACHLORIDE 360 pkg (38825 lbs) (Koln Express) Bremerhaven, 11/18
POLYACRYLAMIDE GRANULE Mitsubishi Chemical Ind 600 bgs (30558 lbs) (Ming Universe) Kobe, 11/22.
POLYACRYLATE Mitrans 840 bgs (29983 lbs) (Ming Universe) Kobe, 11/22
POLYBUTADIENE STYRENE Lubrizol 20 plt (23369 lbs) (California Star) LeHavre, 11/22.
POLYETHYLENE M & S 1 ctl (1047 lbs) (Sea Land Developer) Rotterdam, 11/23
POLYPROPYLENE A One Packaging Products 35 plt (38790 lbs) (California Star) Hamburg, 11/22.
POLYPROPYLENE RESIN Marubeni America 1800 bgs (88824 lbs) (Ever Golden) Tokyo, 11/14.
1800 bgs (88624 lbs) (Ever Laurel) Tokyo, 11/19.
POLYVINYL ALCOHOL Mitsubishi Intl 227 bgs (10115 lbs) (Regina Maersk) Kobe, 11/16
Perry Chemical 770 bgs (38847 lbs) (Ever Golden) Keelung, 11/14.
POLYVINYL BUTYRAL INTERLAYER Schenkers Intl Fwdrs 236 rll (83884 lbs) (Regina Maersk) Kobe, 11/18.
POPPY SEED Schill Food Products 1240 bgs (82002 lbs) (Heide) Rotterdam, 11/18.
POTASSIUM CARBONATE Kay Fries 400 bgs (41455 lbs) (Ever Guard) Antwerp, 11/17
POTASSIUM CHLORATE T R America Chemicals 320 dms (94534 lbs) (Sea Land Developer) Rotterdam, 11/23.
POTASSIUM CHLORIDE POWDER Abbott Chemicals 800 bgs (44092 lbs) (Sea Land Developer) Bremerhaven, 11/23.
POTASSIUM HYDROXIDE Mallinckrodt 336 dms (38185 lbs) (Dart Americana) Bremerhaven, 11/20.
POTASSIUM PERCHLORATE Nu Tech Chemical Ind 150 dms (41867 lbs) (Atlantic Concert) Gothenburg, 11/11.
POTASSIUM SORBATE U S Brokers 200 dms (22288 lbs) (Zim Hong Kong) Osaka, 11/18.
POTASSIUM SULFOGUAIACOLATE Rhone Poulenc 12 pkg (1400 lbs) (Atlantic Service) LeHavre, 11/12
PROPENYL CYANOACETATE Bemo Shpg 5 dms (2480 lbs) (Ming Universe) Kobe, 11/22.
PROPYLENE DICHLORIDE DISTILLED Leschaco 1 con (45018 lbs) (Ever Guard) Rotterdam, 11/17
PROPYLENE DICHLORIDE Leschaco 1 con (46297 lbs) (Ever Going) Antwerp, 11/23
PSEUDOEPHEDRINE Leschaco 12 dms (767 lbs) (Strathconon) Bremerhaven, 11/25
PSEUDOEPHEDRINE HCL Leschaco 20 dms (1278 lbs) (Strathconon) Bremerhaven, 11/25.
Rohde & Liesenfeld 20 ctn (1235 lbs) (Britta Thien) Hamburg, 11/28.
PVC Ferrero 356 pkg (8148 lbs) (Alva Maersk) Leghorn, 11/18.
PVC COMPOUND POWDER Coburn 22 bin (48194 lbs) (Ever Summit) Fos, 11/19.
PYROGALLIC ACID POWDER 20 dms (2425 lbs) (Ming Universe) Kobe, 11/22.
QUINIDINE SULFATE HYDROCHLORIDE Lassen Intl Fwdrs 31 dms (4544 lbs) (Dart Atlantica) Bremerhaven, 11/26.
QUINIZARINE 4 CHLORO 2 AMINO PHE Bemo Shpg 23 dms (4883 lbs) (Ming Universe) Kobe, 11/22.
RED PHOSPHORUS Hummel Chemical 100 dms (12125 lbs) (Ever Laurel) Osaka, 11/18.

S-T

SENNA LEAVES Miltzer & Muench 180 bgs (18851 lbs) (Strathconon) Rotterdam, 11/25.
SILICA GEL D DC Inter Maritime Fwdg 29 pkg (8624 lbs) (Regina Maersk) Tokyo, 11/18.
SILICONE OIL Inter Maritime Fwdg 28 pkg (8624 lbs) (Regina Maersk) Tokyo, 11/18.
SILICONE TETRACHLORIDE Mitsui 1 dms (77 lbs) (Ever Gather) Tokyo, 11/25.
SODIUM BICARBONATE Prescott 700 bgs (38889 lbs) (Regina Maersk) Kobe, 11/18.
SODIUM BICARBONATE N Wituse Products 1583 pkg (121703 lbs) (Ever Guard) Antwerp, 11/17
SODIUM BISULFITE General Plastic & Chemical 350 bgs (38539 lbs) (Heide) Rotterdam, 11/18.
SODIUM CARBOXY METHYL CELLULOSE Robeco Chemicals 20 bxs (0 lbs) (Ever Guard) Rotterdam, 11/19.
SODIUM CASEINATE De Zeen 800 bgs (44771 lbs) (Ever Going) Rotterdam, 11/23.
SODIUM DICHLOROISOCYANURATE 260 dms (78814 lbs) (Ever Gather) Osaka, 11/25.
SODIUM FERROCYANIDE A M Sea & Air Service 800 bgs (45238 lbs) (Ever Going) Felixstowe, 11/23.
SODIUM FLUORIDE CRYSTALLINE Trans World Shpg 700 bgs (38973 lbs) (Ever Gather) Osaka, 11/25
SODIUM FORMALDEHYDE SULFOXYLATE Stuto Intl 440 dms (78565 lbs) (Ever Laurel) Kaohsiung, 11/18.
SODIUM HYPOPHOSPHITE MONOHYDRATE 124 dms (41204 lbs) (Ever Summit) Fos, 11/19.
SODIUM METAPERIODATE SMP 2 dms (229 lbs) (Dart Americana) Felixstowe, 11/20
SODIUM METHOXIDE POWDER Kay Fries 152 dms (38457 lbs) (Ever Guard) Hamburg, 11/17
SODIUM NITRITE Browning Chemical 380 bgs (41050 lbs) (Heide) Rotterdam, 11/19
SODIUM PERBORATE FMC 818 bgs (93688 lbs) (Alva Maersk) Valencia, 11/18.
1832 bgs (187385 lbs) (Alva Maersk) Valencia, 11/19.
FMC 640 bgs (37143 lbs) (Alva Maersk) Valencia, 11/19
Degussa 420 bgs (42483 lbs) (Koln Express) Antwerp, 11/18.
SODIUM PERSULFATE Mitsubishi Intl 640 bgs (35697 lbs) (Ming Universe) Yokohama, 11/22.
SODIUM PHOSPHATE DIBASIC JGR Resources 880 bgs (38378 lbs) (Zim Hong Kong) Osaka, 11/19
SODIUM SACCHARIN 450 dms (47399 lbs) (Zim Hong Kong) Osaka, 11/18.
SODIUM SULFHYDRATE FLAKE UTC 380 bgs (39851 lbs) (California Star) Antwerp, 11/22.
SODIUM TRIPOLYPHOSPHATE Browning Chemical 1700 bgs (92271 lbs) (Heide) Hamburg, 11/19.
560 bbg (887808 lbs) (Strathconon) Rotterdam, 11/25.
SODIUM TRIPOLYPHOSPHATE Browning Chemical 850 bgs (45181 lbs) (Britta Thien) Hamburg, 11/26.
Browning Chemical 800 bgs (83422 lbs) (Britta Thien) Hamburg, 11/28.
Browning Chemical 1700 bgs (92271 lbs) (Britta Thien) Hamburg, 11/26.
SORBITOL E M Ind 80 plt (87855 lbs) (Atlantic Service) Bremerhaven, 11/12.
SPANISH PAPRIKA Savino Del Bene 100 bgs (11087 lbs) (Colombo) Valencia, 11/24.
STAR ANISE House of Lawrence 50 ctn (0 lbs) (Ever Gether) Hong Kong, 11/25.
STARCH 812 bgs (31032 lbs) (Sea Land Developer) Rotterdam, 11/23.
SULFAMETHOXAZOLE Shionogi 154 dms (18673 lbs) (Regina Maersk) Kobe, 11/16.
SULFURIC ACID H P Korn 2 cs (331 lbs) (Koln Express) Hamburg, 11/18.
SULFURIC CHLORIDE ICT Consultants 1 tnk (13960 lbs) (Heide) Rotterdam, 11/19.
TERTIARY DODECYL MERCAPTAN 2 con (84038 lbs) (Ever Summit) Fos, 11/19.
TETRAPOTASSIUM 380 bgs (39881 lbs) (Strathconon) Rotterdam, 11/25.
THIOSALICYLIC ACID Penson 2 dms (251 lbs) (Ever Gather) Keelung, 11/25.
THYME COM French Line 2000 bgs (44092 lbs) (Atlantic Concert) LeHavre, 11/11.
Louis Furth 270 sks (29762 lbs) (Colombo) Valencia, 11/24
THYME LEAVES Louis Furth 1088 bgs (70548 lbs) (Independence) Valencia, 11/18.
TIN OXIDE Alba Fwdg 10 dms (5357 lbs) (Ming Universe) Yokohama, 11/22
TITANIUM DIBORIDE OTE Products 1 cs (1294 lbs) (Atlantic Concert) Liverpool, 11/11.
Blue Ball Chemical 880 bgs (44137 lbs) (Sea Land Adventur) Algeciras, 11/20
Dorsett & Jackson 880 bgs (44137 lbs) (Sea Land Adventur) Algeciras, 11/20.
N L Ind 2400 bgs (124472 lbs) (Koln Express) Antwerp, 11/18.
3200 bgs (185884 lbs) (Strathconon) Rotterdam, 11/25.
SCM 4400 bgs (227284 lbs) (Sea Land Developer) Rotterdam, 11/23
4400 bgs (227284 lbs) (Sea Land Developer) Rotterdam, 11/28.
Superior Materials 2400 bgs (120372 lbs) (Sea Land Adventur) Algeciras, 11/20.
TITANIUM DIOXIDE A X Leschaco 4580 bgs (236600 lbs) (Koln Express) Antwerp, 11/18.
Kemira 640 bgs (33345 lbs) (Stefan Starzynski) Bremerhaven, 11/26
Kemira 779 mix (39590 lbs) (Strathconon) Bremerhaven, 11/25.
Ore & Chemical 160 bgs (9085 lbs) (Stefan Starzynski) Rotterdam, 11/26.
Huxley Raw Material 760 bgs (39590 lbs) (Stefan Starzynski) Bremerhaven, 11/26
Kemira 760 bgs (39590 lbs) (Stefan Starzynski) Bremerhaven, 11/26.
N L Ind 3200 bgs (103952 lbs) (Atlantic Concert) Gothenburg, 11/11.
Rhone Poulenc 1600 bgs (83887 lbs) (Strathconon) LeHavre, 11/25
N L Ind 900 bgs (48230 lbs) (Ever Guard) Antwerp, 11/17
2700 bgs (138593 lbs) (Sea Land Voyager) Rotterdam, 11/26.
N L Ind 1600 bgs (82540 lbs) (Stefan Starzynski) Bremerhaven, 11/26.
TOBIAS ACID Silvey Shpg 300 bgs (18733 lbs) (Ever Laurel) Hong Kong, 11/19
TOLONATE HDT 90 Rhone Poulenc 700 dms (34105 lbs) (Independence) Marseille, 11/18.
TORULA YEAST FOOD GRADE Nestle 720 bgs (40124 lbs) (Heide) Rotterdam, 11/19.
TRICHLORO ISOCYANURIC ACID 625 dms (197036 lbs) (Ever Laurel) Osaka, 11/19.
750 dms (236443 lbs) (Ming Universe) Kobe, 11/22.
375 rlms (118222 lbs) (Ever Gather) Osaka, 11/25.
TRIETHANOLAMINE 73 dms (39912 lbs) (Koln Express) Antwerp, 11/18
TRIOCTYL PHOSPHATE Tolpaz Tol 40 dms (17196 lbs) (Dart Americana) Felixstowe, 11/20.
TRIPHENYL PHOSPHATE Monsanto 840 bgs (38773 lbs) (Strathconon) Felixstowe, 11/25.

U-Z

ULTRAMARINE BLUE Elco Shpg 8 plt (25105 lbs) (Heide) Rotterdam, 11/19.
ULTRAMARINE PIGMENT Elco Shpg 18 plt (0 lbs) (Heide) Rotterdam, 11/19.
ULTRAMARINE PIGMENT Whittaker Clark & Daniels 720 bgs (41310 lbs) (Atlantic Concert) Liverpool, 11/11.
768 mix (41804 lbs) (Dart Americana) Felixstowe, 11/20.
VANILLA BEANS Elon Chemical 200 ctn (11023 lbs) (Zim Hong Kong) Hong Kong, 11/18
VINYL PYRROLIDONE 1 tnk (39815 lbs) (Britta Thien) Hamburg, 11/28.
WOOL GREASE Avi Intl 100 dms (45753 lbs) (Heide) Rotterdam, 11/19.
Containership Agency 67 dms (31105 lbs) (California Star) Felixstowe, 11/22
Joseph H Lowenstein & Sons 74 dms (33309 lbs) (California Star) Felixstowe, 11/22
XYLENOL 1 tnk (43982 lbs) (Heide) Hamburg, 11/19
XYLIDINE Mobay Chemical 1 dms (489 lbs) (Strathconon) Rotterdam, 11/25
ZINC PYRITHIONE P & G Mfg 200 dms (56923 lbs) (California Star) Bremen, 11/22
ZINC SULFATE MONOHYDRATE TECHN United Mineral & Chemical 1050 bgs (79260 lbs) (Britta Thien) Rotterdam, 11/28.
ZINC SULPHIDE USR Optonix 88 dms (26001 lbs) (Regina Maersk) Tokyo, 11/18.
ZIRCONIUM CARBONATE PASTE F B Vandegrift 180 dms (41667 lbs) (California Star) Felixstowe, 11/22

Gov't Rules Force Change

It's a question of survival for many products in the US organic solvents market — and survival means basically one thing: meeting standards set by the Environmental Protection Agency and other Federal as well as state agencies.

The vital role that government regulations play in the solvents industry becomes apparent in a new report from Frost & Sullivan, Inc., New York, which forecasts a total market value of $2.5 billion in 1990 — impacted greatly by government restrictions on use.

Growth areas in this market include, for example, glycols used in antifreeze and the manufacture of polyesters. They have relatively low toxicity and volatility.

Fluorocarbon 113, another example, is used in dry cleaning and also for cleaning sensitive equipment such as electronic components. The compound has low toxicity, is non-flammable and non-explosive and is projected to grow 7.3 percent a year. By contrast, consumption of hydrocarbons, high in both toxicity and volatility, will show a marked decline.

State laws and local regulations, such as the emissions rules in Los Angeles County, as well as Federal laws like the Clean Air Act of 1970 and the Toxic Substances Control act of 1976, determine which solvents will experience market growth and which will decline.

The F&S report details and analyzes specific regulations and policies, the reasons behind them, and how they affect markets.

By far the largest end use for industrial solvents is in paints and coatings. This category alone accounts for one-third of total market volume in the US. This is also the category most affected by government regulations.

Cooper Unit Sells Reagents

Cooper Development Company announced last week that its affiliate Cooper Technicon, Inc., has sold its blood bank reagents and immunochemicals business units to Organon Teknika, a subsidiary of Akzo Pharma B.V., the health care division of Akzo N.V. of the Netherlands, for cash.

"The divestiture of these business will allow Cooper Technicon to focus on its core automated medical diagnostic business and will enable it to reduce outstanding indebtedness," said John L. Edwards president of Cooper Development.

Organon Teknika, with headquarters in Turnhout, Belgium produces diagnostics for blood banks, clinical and hemostasis laboratories, nephrology products as well as neuromuscular blockers. Their annual sales will total approximately $1 billion in 1986.

Cooper Technicon, formed in August 1986 from the combination of CooperBiomedical and Technicon Instruments Corp., is headquartered in Tarrytown, N.Y. The company develops, manufactures and markets automated medical diagnostic systems and reagents as well as similar product lines for industrial use.

Cooper Development Company develops, acquires and invests in businesses involved in emerging medical technologies.

Vaccine Shortage

Continued from Page 7

top-ranking official of your department and by a drug-industry funded group—has already wasted public health dollars and will result in more waste when high-risk young people who were denied the vaccine incur medical expenses for treatment of flu and flu consequences," Dr. Wolfe wrote.

"Paradoxically," the letter continued, "the Federal government has supported immunization of people who do not need it and, due to a limited supply of the vaccine, thereby denied it to people who do."

As a result, Dr. Wolfe said he fears the epidemic could turn out to be worse than it might have been.

A spokesman for Dr. Windom said the text of Windom's remarks at the news conference correctly stated that the vaccine was recommended "for high-risk children and young adults under the age of 35." He said Dr. Windom would not respond to Public Citizen until he has seen Dr. Wolfe's letter.

Shell Is Latest

Continued from Page 7

part of OSHA's chemical industry special emphasis program. About 2,800 workers are employed at the refinery and chemical manufacturing complex.

Shell said the problem apparently resulted from a difference in interpretation over what job-safety data the company is required to report to Federal officials.

"In 32 previous visits over more than ten years, OSHA has never challenged our (Deer Park complex) record-keeping procedures," a company spokesman noted. He also asserted that the 61 citations are unrelated to worker health and safety.

A willful violation is defined by OSHA as one in which an employer either knew that what was being done constituted a violation or was aware that a hazardous condition existed and made no reasonable effort to eliminate it; a serious violation as one where there is substantial probability that death or serious physical harm could result, and that the employer knew or should have know of the hazard.

Lilly to Acquire

Lilly Industrial Coatings has agreed in principle to acquire London Laboratories Limited for approximately $8.5 million London Labs, based in Woodbridge, Conn., is a supplier of silver plating chemicals, with sales in excess of $10 million.

ADVERTISERS' INDEX

CHEMICAL PROFILE

NONYLPHENOL

December 29, 1986

SUPPLY

PRODUCER	CAPACITY*
Borg-Warner, Morgantown, W. Va.	80
Exxon, Lindan, N.J.	20
GAF, Calvert City, Ky.	10
GAF, Lindan, N.J.	30
Kalama, Kalama, Wash.	20
Monsanto, Kearny, N.J.	38
Rohm and Haas, Deer Park, Tex.	40
Rohm and Haas, Philadelphia, Pa.	40
Schenactady, Rotterdam Junction, N.Y.	25
Schenactady, Freeport, Tex.	75
Texaco, Port Neches, Tex.	33
Uniroyal Chemical, Neugatuck, Conn.	10
Total	399

*Millions of pounds annually of nameplate capacity. Some capacity figures are overstated as figures for most producers include production capabilities for other alkylphenols, such as dodecylphenol. Borg-Warner ceased production of dodecylphenol in the first quarter of 1986. Schenactady expanded its capacity to produce other alkylphenols in 1986. Profile last published 12/12/83; this revision, 12/29/86.

DEMAND

1985: 185 million pounds; **1986:** 190 million pounds; **1990:** 215 million pounds.

GROWTH

Historical (1976-1985): 5 percent per year; **future:** 3 percent per year through 1990.

PRICE

Historical (1952-1986): High, 50c. per pound, tanks, freight allowed; low, 14½c. per pound, same basis. **Current:** 35c. to 40c. per pound, same basis.

USES

Surfactants (primarily industrial and institutional), 70 percent; rubber and plastic antioxidants, 20 percent; other, including lube oil additives, 10 percent.

STRENGTH

Demand for nonylphenol ethoxylate surfactants is strong, reflecting increasing cleaner consumption by service-oriented industries such as restaurants and hotels. Low nonylphenol costs assure that linear alcohol ethoxylates will not encroach upon this market.

WEAKNESS

Industry oversupply has meant that producers have had to pass lower feedstock cost savings through to consumers: prices fell 20 percent over the past year.

OUTLOOK

The current consolidation and rationalization in the ethoxylates business should lead to better margins for nonylphenol producers. Nonylphenol ethoxylates have been banned in Switzerland and are under scrutiny in West Germany because of biodegradability concerns; for the long-term, US producers are apprehensive about similar actions here.

BOOKSHELF

Programs for Engineers

Competition in the chemical industry demands that engineers solve complex problems quickly. Although many engineers have powerful microcomputers to assist them, the time saved is not as great as it could be because of a severe lack of ready-to-use programs. This volume* seeks to remedy the situation by offering a step-by-step analysis of dozens of practical programs that can be applied as is, or modified, to handle individual situations.

The programs offered are designed to solve problems across a broad spectrum from thermodynamics, heat transfer and pollution control to mathematics, physical properties of chemicals and economics. A completed sample run of each program shows how it works and many of the programs come with essential data, saving time in searching obscure sources for obscure data.

*BASIC PROGRAMS FOR CHEMICAL ENGINEERS. By Dennis Wright. Cloth. 340 pages. 6 X 10 inches. Van Nostrand Reinhold, 115 Fifth Avenue, New York, N.Y. 10003. $32.95

Japanese Technology

This series of studies* on Japanese technology assesses Japanese research and development in four of today's most visible high-technology areas: computer science, opto- and microelectronics, mechatronics (a term used by the Japanese to describe the union of mechanical and electronic engineering necessary to produce the next generation of machines, robots and the like), and biotechnology.

The evaluations were conducted by panels of leading US scientists — chosen from academia, government and industry — who are actively involved in research in their area of expertise. The main focus of the assessments is on the current status and long-term direction and emphasis of Japanese research and development. Other aspects covered include evaluation of the state of the art, identification of key Japanese researchers, R&D organizations and resources and comparative US efforts.

The volume is an account of work sponsored by the Japanese Technology Evaluation Program (JTECH) which is operated for the Federal government by Science Applications International Corporation (SAIC) to provide definitive technical assessments of emerging Japanese thrusts in selected high technology areas.

*JAPANESE TECHNOLOGY ASSESSMENT. By J. Allus et al for Science Applications International Corporation, La Jolla, Calif. Cloth. 6 X 9½ inches. 507 pages. Noyes Publications, Mill Road at Grand Avenue, Park Ridge, N.J. 07656. $62.00.

Industrial Chemistry Survey

Emphasizing business aspects rather than engineering, this volume* seeks to fill a void in the otherwise abundant literature on this subject. The introduction describes all of the important areas of the chemical industry from an economic perspective. After an overview of the leading chemicals and chemical companies, the book discusses each of the industry's major areas in detail.

Generally these are chemical products, chosen for inclusion based on their value-added to the chemical industry's contribution to the Gross National Product, as listed in the *Annual Survey of Manufacturers*, which categorizes the nation's industries by Standard Industrial Code (SIC) numbers.

Eighty-four percent of the industries listed under Chemicals and Allied Products (SIC 28) are covered. Also, other industries in which chemistry plays a crucial role are described, including Paper and Allied Products (SIC 26), Petroleum Refining (SIC 29), and Rubber and Miscellaneous Plastic Products (SIC 30).

*SURVEY OF INDUSTRIAL CHEMISTRY. By Philip J. Chenier. Cloth. 6½ X 9½ inches. 422 pages. John Wiley & Sons, Inc., One Wiley Drive, Somerset, N.J. 08873. $45.00.

MEETINGS CALENDAR

December 29, 1986

JANUARY

ASSOCIATION OF THE NON-WOVEN FABRICS INDUSTRY, third highloft and fiberfill conference, Executive Mariott Hotel, Charlotte, N.C., January 27-28.

CHEMICAL INDUSTRY ASSOCIATION, luncheon meeting, Parker Meridien Hotel, New York, January 29.

COMMERCIAL DEVELOPMENT ASSOCIATION, 8th annual industrial commercial development course, with Delphi Marketing Services, Inc., Sheraton Centre Hotel, New York, January 26-28.

SOAP AND DETERGENT ASSOCIATION, 60th Annual Meeting and Industry Convention, Boca Raton Hotel and Club, Boca Raton, Fla., January 29-February 1, 1987.

LATER ON

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, center for chemical process safety, international conference on chemical safety issues, Omni Shoreham Hotel, Washington, D.C., February 3-5.

AMERICAN PETROLEUM INSTITUTE, 12th world petroleum congress, international forum for exchange of technical information about the petroleum industry, Houston, Tex., April 26-May 1.

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, 12th annual Spring workshop and exhibition, Skyline Ottawa Hotel, Ottawa, Ontario, Canada, April 27-30.

CHEMICAL GROUP OF NATIONAL ASSOCIATION OF PURCHASING MANAGERS, mid-Winter conference, "Purchasing — Opportunity in a Changing World," Baton Rouge Hilton Hotel, Baton Rouge, La., February 18-20.

CHEMICAL MARKETING RESEARCH ASSOCIATION, Houston Meeting, "The US Chemical Industry-Responding to Change." Westin Galleria Hotel, Houston, Tex., February 4-5, 1987.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, 73rd mid-year meeting, Chicago Marriott Hotel, Chicago, Ill., April 26-29.

CHINACHEM '87, international exhibition on chemical and petrochemical industries, China International Exhibition Center, Beijing, China, April 3-9.

CHLORINE INSTITUTE, Winter meeting, Mayflower Hotel, Washington, D.C., March 15-18.

DRUG, CHEMICAL & ALLIED TRADES ASSOCIATION, 51st annual dinner, Waldorf-Astoria Hotel, New York, March 18; Spring luncheon, Sheraton Centre Hotel, New York, N.Y., June 11.

FERTILIZER INSTITUTE, 1987 annual meeting, Marriott Orlando World Center, Orlando, Fla., February 1-3.

FIRE RETARDANT CHEMICALS ASSOCIATION, international conference on flame retardancy and fire safety, Sheraton New Orleans Hotel, New Orleans, La., March 22-25.

INSTITUTE OF GAS TECHNOLOGY, 11th annual symposium on energy from biomass and wastes, Hotel Royal Plaza, Walt Disney World Village, Buena Vista, Fla., February 2-6.

INTERNATIONAL PRECIOUS METALS INSTITUTE, 11th international precious metals conference, Brussels, Belgium, June 14-18.

INTER-SOCIETY COLOR COUNCIL, scientific conference, Williamsburg Lodge, Williamsburg, Va., February 8-11.

NATIONAL PETROLEUM REFINERS ASSOCIATION, 85th annual meeting, Convention Center, San Antonio, Tex., March 29-31; 12th international petrochemical conference, Convention Center, San Antonio, Tex., April 5-7.

POLYURETHANE MANUFACTURERS ASSOCIATION, Spring meeting, commercial development of new castable systems, Fairmont Hotel, Dallas, Tex., April 26-28.

SOCIETY OF MANUFACTURING ENGINEERS, advanced ceramic /87 conference, Clarion Hotel, Cincinnati, Ohio, February 17-19.

SOCIETY OF PLASTICS ENGINEERS, South Texas section, fifth international conference on polyolefins, Wyndham Hotel-Greenspoint, Houston, Tex., February 23-25; SPE-ANTEC, Bonaventure Hotel, Los Angeles, Calif., May 3-7.

SOCIETY OF THE PLASTICS INDUSTRY, 42nd annual conference of the composites institute, Cincinnati Convention & Exhibition Center, Cincinnati, Ohio, February 2-6; vinyl formulators division, 9th annual technical meeting and conference, Destin Hilton Hotel, Destin, Fla., April 8-10.

THE FERTILIZER INSTITUTE, 1987 Annual Meeting Marriott Orlando World Center, Orlando, Fla., February 1-3, 1987.

JOBS & PEOPLE JOBS & PEOPLE

Dr. Wayne Godwin, who has been named president of the Fibers Division and executive vice-president of BASF Corporation, effective April 1, 1987. He is currently president of BASF Structural Materials.

Aristech Chemicals Names Executive Officers

Aristech Chemical Corporation, formerly the USS Chemicals Division of USX Corporation, has appointed Charles W. Hamilton senior vice-president of chemicals and specialty products and James J. Driscoll Jr. vice-president of polymers.

Mr. Hamilton will be responsible for production, research and development, and worldwide marketing and sales of chemicals and specialties.

Mr. Driscoll was previously managing director of polypropylene at USS Chemicals.

C. Hamilton

J. Driscoll

William J. Freund, who has been appointed vice-president of global specialty chemicals at Johnson Wax. He was most recently global director of Johnson Wax's specialty chemicals business.

Dow Chemical Names Associate Scientists

Dow Chemical Company has named Frank L. Saunders an associate scientist in the Polymeric Materials Laboratory and Richard Solem an associate scientist in the Advanced Technology Applications Research Laboratory.

Dr. Saunders joined Dow in 1953. He has been awarded 21 patents and is the author of 17 publications. Dr. Saunders is an expert in colloids and latex polymers.

Mr. Solem joined Dow's special assignment program in 1966 and has worked on a variety of assignments in the Michigan Division.

F. Saunders

R. Solem

LONNIE U. HAYNES JR. has been named an account supervisor for coatings and adhesives sales in the technical marketing group of Hercules Incorporated... **THOMAS J. MALAFRONTE** has been appointed business manager for surfactants and specialty monomers in the process chemicals department of American Cyanamid Company... **CHARLES W. EMMERICH** has been named general manager of Petro H-R in Caracas, Venezuela, by H-R International.

KOOK-JIN BAE has been appointed technical service representative for polymer additives in the Argus Division of Witco Corporation... **STEVEN N. GABELMAN** has been named marketing manager of flexible slabstock urethane at Union Carbide Corporation... **HOWARD L. BRAINARD** has been named marketing manager of resins and additives at Inolex Chemical Company.

L. Haynes

T. Malafronte

C. Emmerich

K. Bae

WILLIAM R. GALLOWAY JR. has been named chairman, president and chief executive officer of Petroferm Inc., which develops technologies in the petroleum, electronic chemicals and health care fields... **JUSTIN L. HIRSHMAN** has been appointed director of commercial evaluation and development in the Development Division of M&T Chemicals Inc.

ROB WEISE has been named sales representative covering Northern Detroit and the Flint and Saginaw areas in Michigan for ChemCentral Corporation, **DAN W. YINGER** has been appointed a sales representative in the Atlanta area, **ROBERT WILSON** has been named a sales representative in Greensboro and **JERRY WILLIAMS** has been appointed sales manager in Detroit.

GEORGE R. GREENLEE has been named district manager for "Bondmaster" products at National Starch & Chemical Corporation... **WILLIAM L. FAGLEY** has been appointed business counselor for Dow Chemical Company... **RAMESH RATAN** has been named vice-president for finance and administration at Repligen Corporation.

S. Gabelman

H. Brainard

W. Galloway

J. Hirshman

CARL U. NABLO has been appointed senior sales representative at Unocal Chemicals Division of Unocal Corporation, responsible for developing distribution business in Eastern Tennessee and parts of Georgia.

BUSINESS BRIEFS BUSINESS BRIEFS

DU PONT next year will award cash prizes of $10,000 in each of two categories — new construction and reconstruction — to recognize excellence in architectural design. The awards program, open to all US and Canadian registered architects, will be limited to buildings completed within the past five years that incorporate single-ply membrane roofing systems based on Du Pont "Hypalon" synthetic rubber.

DEGUSSA AG of West Germany has established a sales company in Istanbul, Turkey. The company, known as Degussa Ticaret Ltd., will be responsible for all the Degussa activities previously conducted by Boykim AS of Istanbul.

IBF SA, a biotechnology firm based in France, has created a US subsidiary, IBF Biotechnics Inc., based in Savage Md. The new company will distribute chromatography and tissue culture reagents in the US and Canada. IBF says it has developed a complete line of gels for chromatography and a line of silica-based gels.

MOBAY CORPORATION has published a new "Merlon" polycarbonate design manual. The 48-page brochure addresses design considerations including structural design, design calculations, the influence of orientation, design details to permit proper processing techniques, elements of assembly and tolerances.

PEER CHEMICAL, Wheeling, Ill.-based supplier of organic pigments, has appointed Pacific Coast Chemicals Company of Berkeley, Calif., as its West Coast area representative. Pacific Coast Chemicals will be responsible for marketing Peer's product line to the ink, paint, coatings, plastics and industrial finishing market.

RESEARCH POLYMERS INTERNATIONAL, Grand Prairie, Tex., says it has developed a catalyst concentrate for use in polypropylene injection molding applications. The material, when used at low concentrations with polypropylene resins, will increase melt flow and improve processability, the company says. Improvement in part production rates of 25 percent have been established for hard-to-fill multi-cavity molds without loss in physical performance, according to the firm.

RHONE-POULENC AGROCHIMIE is combining all of its operations in Japan into a new subsidiary, Rhone-Poulenc Agro KK, which will be responsible for development and sales. The new company will be a 50-50 joint venture of Rhone-Poulenc Agrochimie and Showa Rhodia Chemical. The latter is a joint venture of R-P and Showa Denko. Showa Rhodia will continue to manufacture oxadiazon, a herbicide used in Japanese paddy fields.

VAN OMMEREN, the Rotterdam-based service group involved in worldwide transportation, storage and trading, has acquired E.T. Horn Company, an importer and distributor of specialty chemicals in the US. E.T. Horn represents approximately 30 major US and foreign chemical companies in the food, paint, pharmaceutical, plastics, adhesives and electronic industries.

WITCO CORPORATION'S Humko Chemical Division has installed computer-controlled bagging lines that can automatically package any of more than 200 different oleochemical products in an integrated production operation at its Memphis, Tenn., plant. The installation includes two lines that fill, seal and weigh 50-pound bags of flaked fatty chemicals in a sequence of operations directed by computer. Operators are needed only to remove bags from the scales at the end of the lines and to stretch-wrap pallet loads with plastic film, according to the company.

NEWS AT HOME

NEWS ABROAD

THE MARKETS

CMR MARKET INDEX

CHEMICAL MARKETING REPORTER's market index of chemicals and related materials (100=1974 average), based on 97 key commercial chemicals, appears alongside with data for two weeks ago, last month and last year.

Dec. 26, 1986	151.65
Dec. 12, 1986	151.51
Nov. 28, 1986	151.83
Dec. 27, 1985	154.13

Chemical Prices Start on Page 24

CHEMICAL MARKETING CUES